Textile Industries

Formerly "COTTON"

A. W. R. C. Smith Publication

MARCH, 1953

Highlights

You Don't Want a Union? . 89

Here's the Pay-Off . . . 97
(Research findings and quality control at West Point Mfg. Co.)

"Productivity will rise . . ."
Vocational Education . . . 135

Simple Fiber Test Lab . . 122

Tips on Nylon-Wool Blends . 91

Continuous Dyeing Chart . 94
(Six different procedures)

Cut Your Needle Costs . . . 116

Speedometer for Slashers . 118

Colors Matched; No Walking 120

Stabilizing Rayon 128
(Practical pointers about Avcoset)

Complete Contents Page 3

1200 Pounds Production Per Hour

Battery of Cocker Slashers in a Southern Mill . . . on Cotton Yarns

In addition to all of the usual features required for fast and accurately controlled production these Cocker Slashers offer

1. Differential Friction Compensating Control, which permits continuous high speeds without heating of Friction.

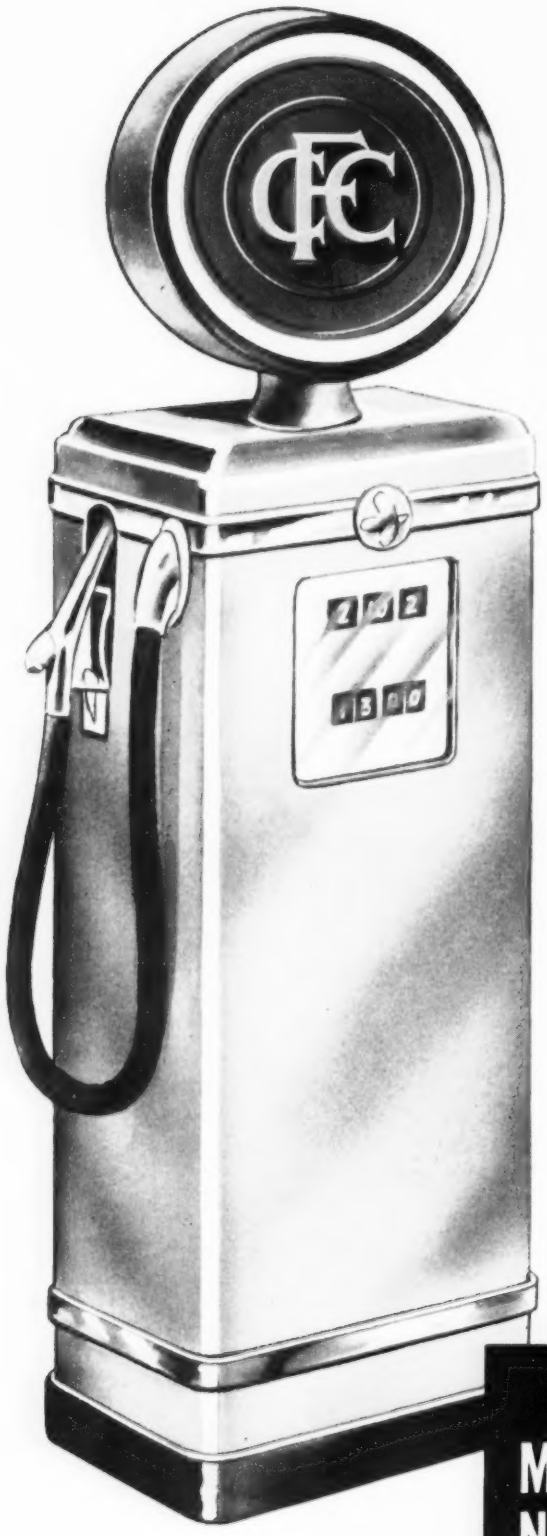
2. New Cocker Friction, which produces hard beams and gives 20% to 25% more yarn per loom beam.

Cocker Slashers are made in 7, 9, and 11 Cylinders for all types of yarns.

THE LEADER COCKER AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT



Liquid Capital to power your sales

There is no doubt that liquid capital — Ready Cash — can be the high octane fuel to power your sales and put your profits in high gear.

We will be glad to furnish information on how Commercial Factors can keep you supplied with liquid funds. Send us the coupon below.

Commercial Factors Corporation

TWO PARK AVENUE, NEW YORK 16, N.Y.

MAIL NOW

Mr. J. Achelis, *President*
Commercial Factors Corporation
Two Park Avenue, New York 16, N.Y.

Please send us information describing your service.

Name ..... Title .....

Company .....

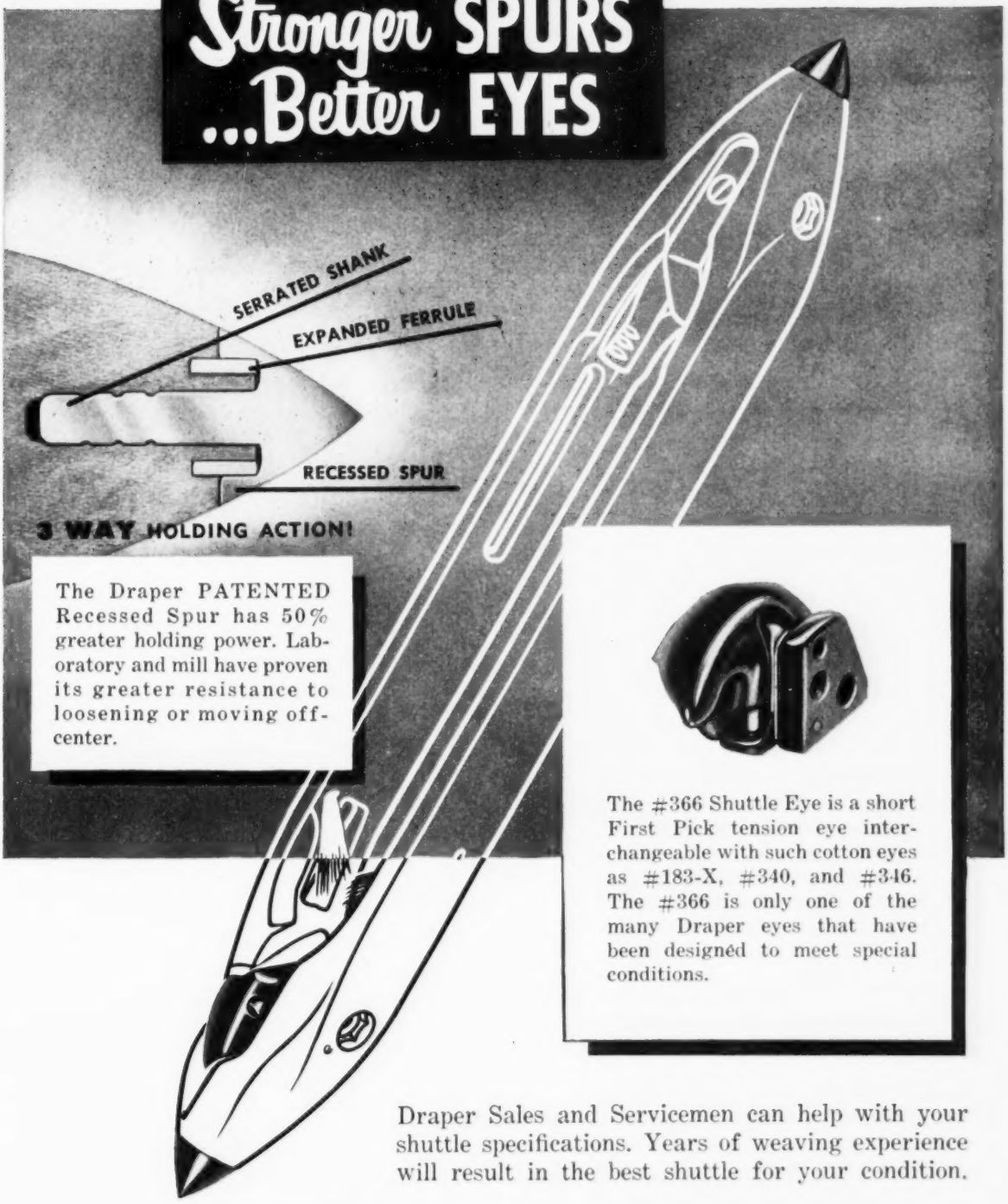
Address .....

City & State .....

TEXTILE INDUSTRIES is published monthly at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. Executive and Editorial Offices: 806 Peachtree St., Atlanta 5, Ga.
Subscription Rates, United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $5.00 per year. Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879.

Volume 117 Number 3

Stronger SPURS ...Better EYES



3 WAY HOLDING ACTION!

The Draper PATENTED Recessed Spur has 50% greater holding power. Laboratory and mill have proven its greater resistance to loosening or moving off-center.

The #366 Shuttle Eye is a short First Pick tension eye interchangeable with such cotton eyes as #183-X, #340, and #346. The #366 is only one of the many Draper eyes that have been designed to meet special conditions.

Draper Sales and Servicemen can help with your shuttle specifications. Years of weaving experience will result in the best shuttle for your condition.

"Retaining Leadership through Research"

DRAPER CORPORATION

ATLANTA, GA. HOPEDALE, MASS. SPARTANBURG, S.C.

NEW!

GAS-FADING INHIBITORS

PERMALENE AF

DURABLE

Applied in the Dye Bath

Produces stable emulsions at all dyeing temperatures without additional emulsifiers — exhausts uniformly with the dyestuff in the same bath — provides a protective finish fast to washing and dry cleaning.

VELVAMINE PG

Applied as a Finishing Agent

Imparts superior protection against atmospheric fading — has no effect on light fastness of acetate colors — gives a soft mellow hand to the fabric.

VELVAMINE PG L

Applied in the Finishing Bath

Imparts excellent protection without appreciable change in hand of fabric — has no effect on acetate colors — is compatible with usual dullers, weighters and resins.

Write for literature

REFINED PRODUCTS CORPORATION

Manufacturing Chemists **LYNDHURST • NEW JERSEY**

Southern Representative: DYER S. MOSS COMPANY, 2511 Lucena St., Charlotte 6, North Carolina
New England Representatives: DONALD R. MacLEAN, Box 202, So. Dartmouth, Mass.
California Representative: SIDNEY SPRINGER, 311 S. San Pedro St., Los Angeles, California
Canadian Selling Agent: Reliable Color & Chemical Company, 85 Cannon St. W., Hamilton, Ontario
Export Division Manager: Chester Feil, Refined Products Corp.

Vol. 117, No. 3

Textile Industries

March, 1953

CONTENTS

Copyrighted 1953

Additional Items

Management

Atlantic City Show Being Planned Well In Advance ... 73
Need Aid on Safety? Here's a Film ... 73
ACMI Year Hence Plans ... 75
Quality Control and the Research Function ... 93
On Services and Margins for Textiles ... 167
Georgia Textiles in the Limelight ... 189

Cotton

Collar Conversions Save Labor ... 83
Standards for Institutional Textiles ... 119
Guest Towels with a "Used" Look? ... 126
More Discussion on Evenness ... 159
Cot Combats Eyebrowing ... 203

Synthetics

"Truce" Suggestions for "Battle of the Fibers" ... 145
New Roving and Spinning Drafting Elements ... 201
Staple from Tow by Perlok System ... 215
Softener for Synthetics Improves Cutting and Laying Up Properties ... 225

Wool

Cutting Wool Roving Off Spool Can Be Dangerous ... 143
Tandem Napper Features Precise Control ... 225
Garnett for Short Fiber Stock ... 211

Wet Process

Sound Waves May Speed Fabric Dyeing ... 116
Progress on Colorfastness Tests ... 133
High Temperature Stock Dye Kettle ... 217

Knitting

12 Denier Yarn Not To Solve All Problems ... 73
Only One Knitting Show Now ... 75
Full-Fashioned Underwear, Outerwear Machine ... 83
One Bath Scour and Dye System for Nylons ... 209
Knit Goods Washer Needs Little Attention ... 221

DEPARTMENTS

News in Brief ... 73
Textile Industry Activity Charts ... 77
An Executive Views the News in Textiles ... 79
Future Events ... 81
New Equipment and Materials ... 83
Shorts and Remnants ... 87
How Other Men Manage ... 151
What the Textile Mills Are Doing ... 169
Personal Notes About Men You Know ... 173
Suppliers' News ... 180
Helpful Booklets Free ... 193

Features

		SPIN-WEAVE	WOOL	SYNTHETICS	WET PROCESSING	KNITTING
So You Don't Want a Union?	89	•	•	•	•	•
Tips for Woolen-System-Processing of Garnetted Nylon-Wool Blends	91		•	•		
Ready Reference Chart for Continuous Dyeing Procedure	94				•	
Ravel Seams on Inspection Form (Knitter Hints No. 38)	96					•
Research and Quality Control Pay Off	97	•	•	•	•	•
Jig for Gluing Loom Brake Corks	109	•	•	•		
Through-Floor Stripper System	110	•				
Cotton Consumption Up 3 Million Bales	111	•				
Price of Survival in a Danger-Filled World	112	•	•	•	•	•
Want to Prevent Excessive Needle Costs?	116					•
Slasher Tender Can See If Speed Is Right	118	•				
Save Steps When Matching Colors	120				•	
A Simple Cotton Fiber Testing Laboratory for Mills	122	•				
How a Texas Hosiery Mill Cut Box Stamping Time in Half	127					•
Stabilization of Rayon Fabrics by Avcoset Method	128				•	
Raymond E. Henderson of Dan River on Vocational Education	135	•	•	•	•	•
The Toll of Taxes	145	•	•	•	•	•

General and Technical

		SPIN-WEAVE	WOOL	SYNTHETICS	WET PROCESSING	KNITTING
Mr. Mill Executive: What Is Your Opinion?	75	•	•	•	•	•
Commercial Standard for Flammability	90				•	
Dynel Dyeing Costs Cut by Improved Formulations	115				•	
Business Outlook Good, Survey Shows	119	•	•	•	•	•
U. S. Team Reports on British Cotton Industry	121	•				
Protect Washable Woolens from Moths	126		•			
12 Denier Nylon for "Luxury" Hose	133					•
Portable Pipe Bender Real Time Saver	137	•	•	•	•	•
Burlap Bags Now Made from Tubular Fabric	147	•				
Wrinkle Tester Simulates "Clenched Fist" Technique	149				•	
Life and Speed of Travelers	151	•				
Inexpensive Apparatus Cleans Dust Bags Well	153	•				
Copy Desk Aids Designers	155	•	•	•		
Simple "Slide Board" Helps Reduce Ends Down	157	•				
Stalls for Quill Trucks Prevent Mixed Yarn	159	•	•	•		
Uneven Work Attributed to Poor Belt Maintenance	160	•				
Get More Yardage on Cloth Rolls	163	•		•		
New Roving and Spinning Drafting Elements	201		•	•		

NBP

John C. Foxville, *Editor* John C. Cook, *Bus. Mgr.*

For names and addresses of other editorial and business representatives, see page 165

Editorial and Executive Offices: 806 Peachtree St., N. E., Atlanta 5, Georgia

ABC AUDITED PAID CIRCULATION

marks the spot

that isn't necessary!

Same construction . . .
sized with STYMER LF

Typical water-spotting on taffeta (top). Same grade of taffeta sized with Stymer LF (bottom).

Loom-finished fabrics resist water-spotting . . . when sized with new, durable STYMER LF

Do you weave loom-finished fabrics from solution-dyed acetate? Taffetas, for example? Only to find that conventional sizes water-spot?

If so, ask about Stymer LF.

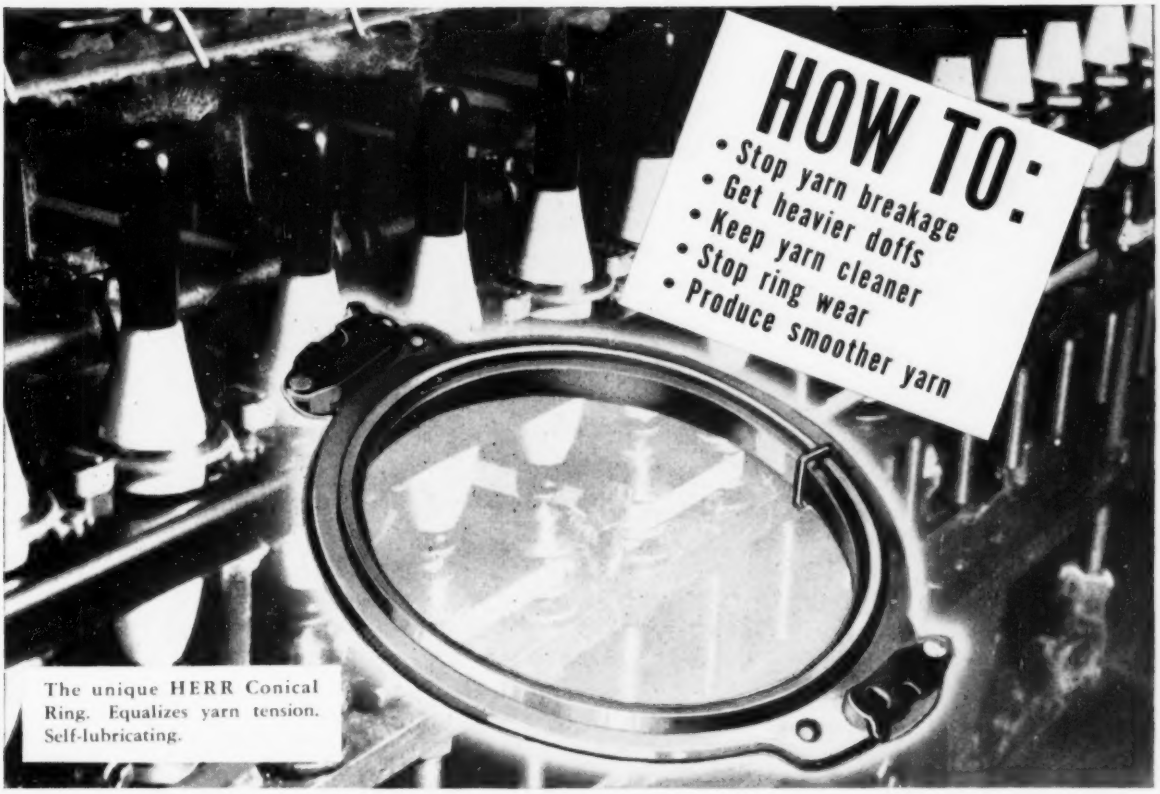
Stymer LF is a new, *durable* size which makes it possible to take *full* advantage of loom-finishing. Taffetas woven from warps sized with Stymer LF *do not* water-spot . . . have a crisp, marketable hand which is also durable to dry-cleaning.

Stymer LF, for sizing, is as efficient as Stymer S, used so widely for conventional acetate sizing . . . but, in Stymer LF, Monsanto offers an entirely new product—a size which gives you all of the opportunities of weaving top-quality fabrics *plus* a lively fabric that does not water-spot.

For your customers' sake, for your own sake, if you work with solution-dyed acetate, you will want to find out more about Stymer LF. Get in touch with MONSANTO CHEMICAL COMPANY, Textile Chemicals Department, Boston 49, Mass. Stymer Reg. U.S. Pat. Off.

MONSANTO
CHEMICALS — PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND



The unique HERR Conical Ring. Equalizes yarn tension. Self-lubricating.

FREE INFORMATION for spinners and twisters of:

- Nylon
- Cotton
- Wool
- Rayon
- Silk
- Worsted
- Orlon
- Vicara
- Dynel
- Fiber glass
- Fiber blends
- Acrilan
- Dacron

• HERR Conical Rings adapt your equipment for any textile fiber or blend. Whether you use natural, synthetic or a blend of these fibers, you'll get more production at lower cost with conical rings. And you can get conical rings only from HERR. Whatever spinning or twisting problems you have, you'll find HERR glad to offer friendly advice and engineering counsel. Mail the handy coupon below today for FREE information on HERR Conical Rings.

HERR

MANUFACTURING CO., INC.

310 FRANKLIN STREET, BUFFALO, N. Y.

HERR Manufacturing Co., Inc.
310 Franklin Street
Buffalo 2, New York

Without obligation, send me complete information on how HERR Conical Rings increase production and cut costs!

Name ..... Title .....
Company .....
Address .....
City ..... State .....

Actual mill results show how new Warner & Swasey-Sulzer Weaving Machine can improve your mill's operations!

HERE'S EXACTLY WHAT YOU CAN EXPECT FROM THIS NEW MACHINE..

ELIMINATES

REDUCES

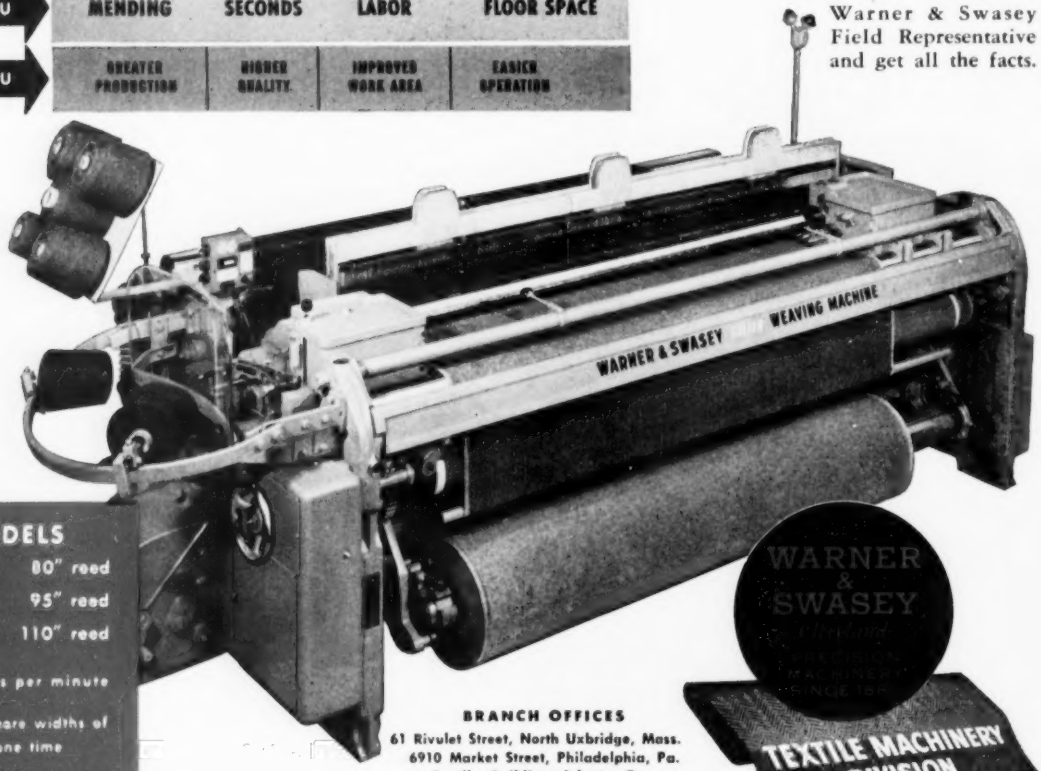
SAVES YOU — MENDING · SECONDS · LABOR · FLOOR SPACE

GIVES YOU — GREATER PRODUCTION · BETTER QUALITY · IMPROVED WORK AREA · EASIER OPERATION

EXTENSIVE production records—in every one of the leading mills where it has been installed—prove that the new Warner & Swasey-Sulzer Weaving Machine delivers many operational advantages never before possible!

Weaving worsteds, woolens, spun synthetics and blends, this revolutionary new machine produces better quality fabrics, in greater volume, at less cost. It's a machine that will pay for itself fast!

If you'd like to learn exactly how this new machine can improve *your* mill's operations, call in your nearest Warner & Swasey Field Representative and get all the facts.



MODELS

M-2820	80" reed
M-2860	95" reed
M-2960	110" reed

★ 240 picks per minute

★ One or more widths of cloth at one time

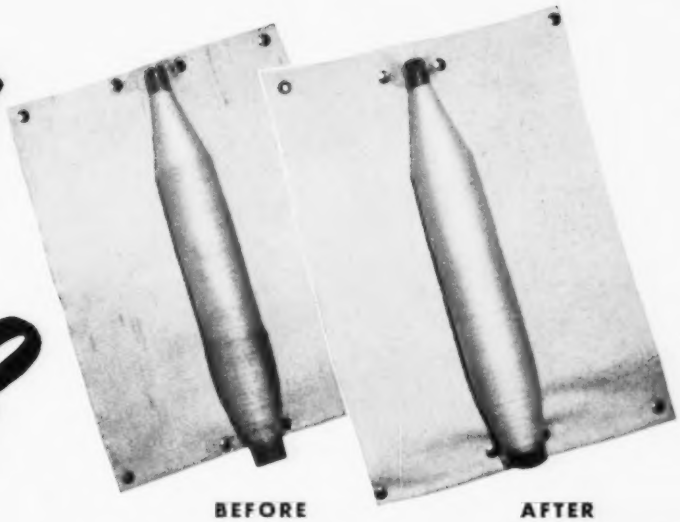
★ Large stationary filling package

BRANCH OFFICES
61 Rivulet Street, North Uxbridge, Mass.
6910 Market Street, Philadelphia, Pa.
Candler Building, Atlanta, Ga.
1820 Browning Ave., Charlotte, N.C.

WARNER & SWASEY
TEXTILE MACHINERY DIVISION

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

Smug about Smog?



BEFORE

Samples of yarn and cloth prior to installing an AMCO electrostatic air cleaning system. Repeated washings were unsuccessful in removing smudge from cloth.

AFTER

Following the installation of an Amco central station with electrostatic filters, these results were obtained. Freedom from carbon and dirt in air spelled the big difference!

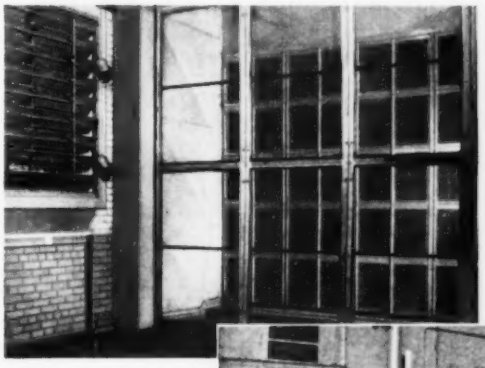
YOU CAN'T AFFORD TO BE...

HERE'S PROOF...

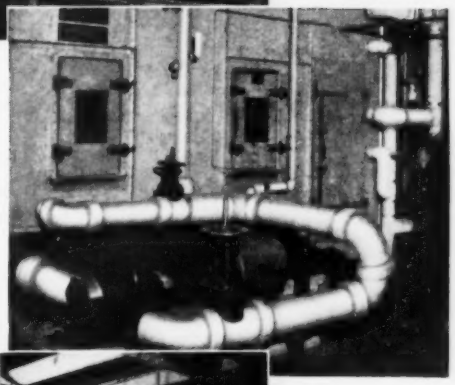
"Don't put up with dirty air, if you want to put up superior yarns" . . . recommends York Knitting Mills, Toronto, Canada, where filtering and washing air *pays off* . . . in better quality yarns! And the "Before and After" pictures reproduced above give graphic support to that advice.

An Amco central station air conditioning system delivers *only* air that's custom tailored . . . to the proper degree of temperature; to the exact relative humidity desired; and most important . . . air just as fresh and clean as a breeze off the ocean! No wonder results are uniformly outstanding . . . regain maintained; yarn counts kept more even; static electricity eliminated; closer machine adjustments and higher speeds maintained; less broken fibers, dust and fly; cleaner yarns and cloth; stronger, smoother and more uniform fabrics; greater worker comfort and efficiency — to mention a few.

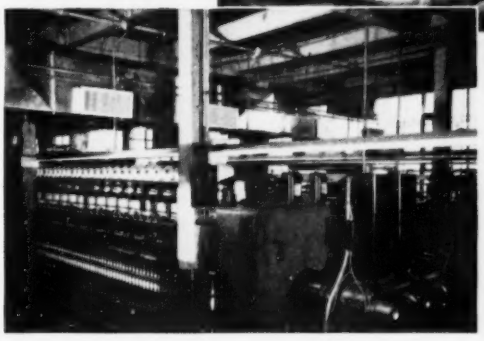
Amco has *both* duct and ductless systems — and can install humidification, evaporative cooling or central station air conditioning, alone or in combination. You can rely on Amco for impartial advice on the installation best suited to your needs. Call an Amco engineer.



Plenum chamber showing recirculating air dampers with damper motors at left; lint screens in foreground; electrostatic filter in background.



Centrifugal pump and piping which operates air washer in background.



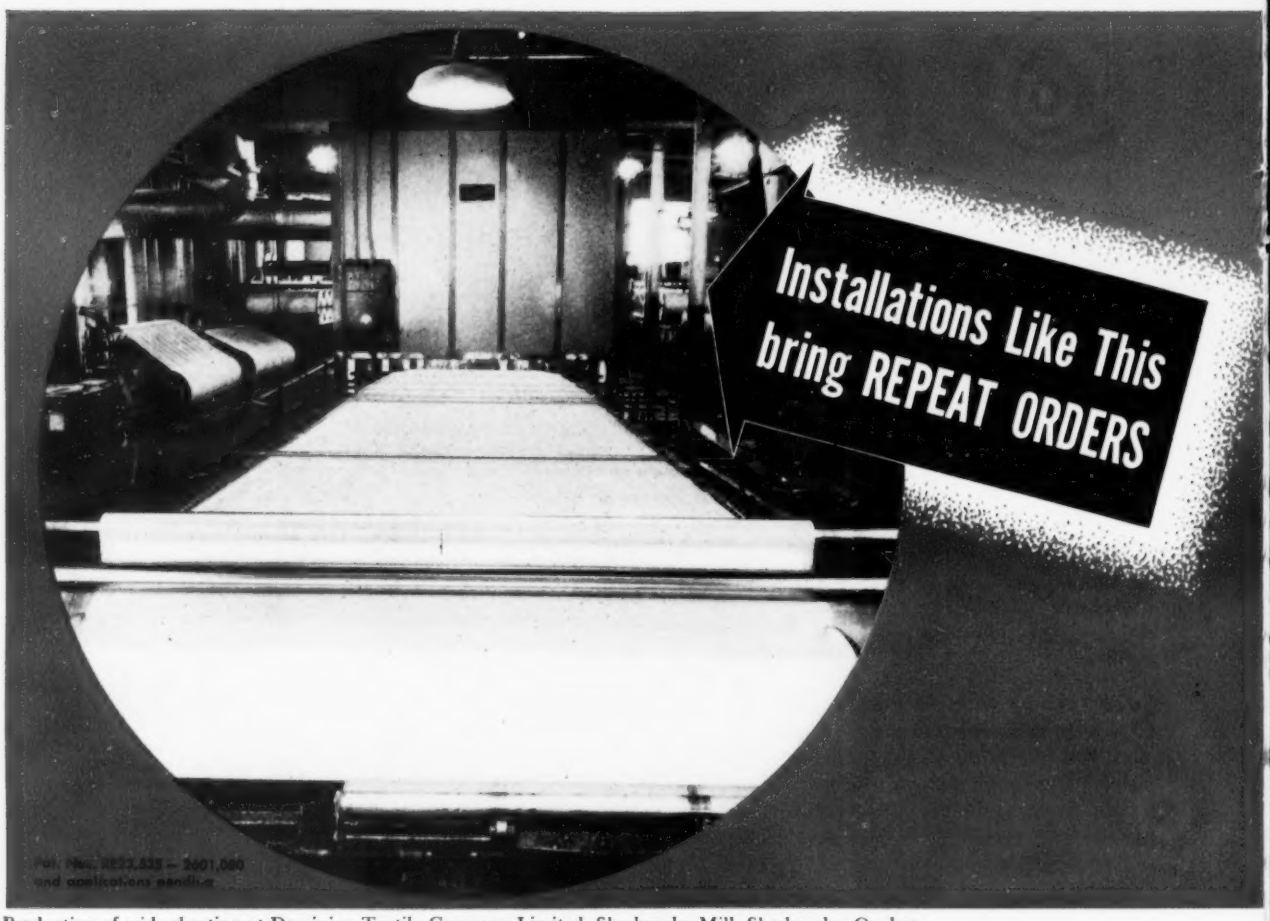
Spinning room — showing air supply duct with atomizers over each air outlet mounted on air and water pipes.

AMCO

AIR CONDITIONING SYSTEMS

Humidification • Evaporative Cooling • Central Station

AMERICAN MOISTENING COMPANY
AFFILIATED WITH GRINNELL COMPANY, INC.
PROVIDENCE, R. I.
ATLANTA • BOSTON • CAMDEN • CHARLOTTE



Production of wide sheeting at Dominion Textile Company Limited, Sherbrooke Mill, Sherbrooke, Quebec

Uxbridge *Gentle-Air* Dryers*

SEND FOR:

Bulletin A:

Maximum Production Model, up to 1780 lbs. per hour

Bulletin B:

Normal Production Model, up to 750 lbs. per hour

For six years, high output mills have used Uxbridge Gentle-Air units to dry all staple yarns — cotton, woolen, worsted, man-made or blend. The result is a high ratio of repeat orders: **Additional** Uxbridge Gentle-Air Dryers ordered by mills requiring more than one slasher —

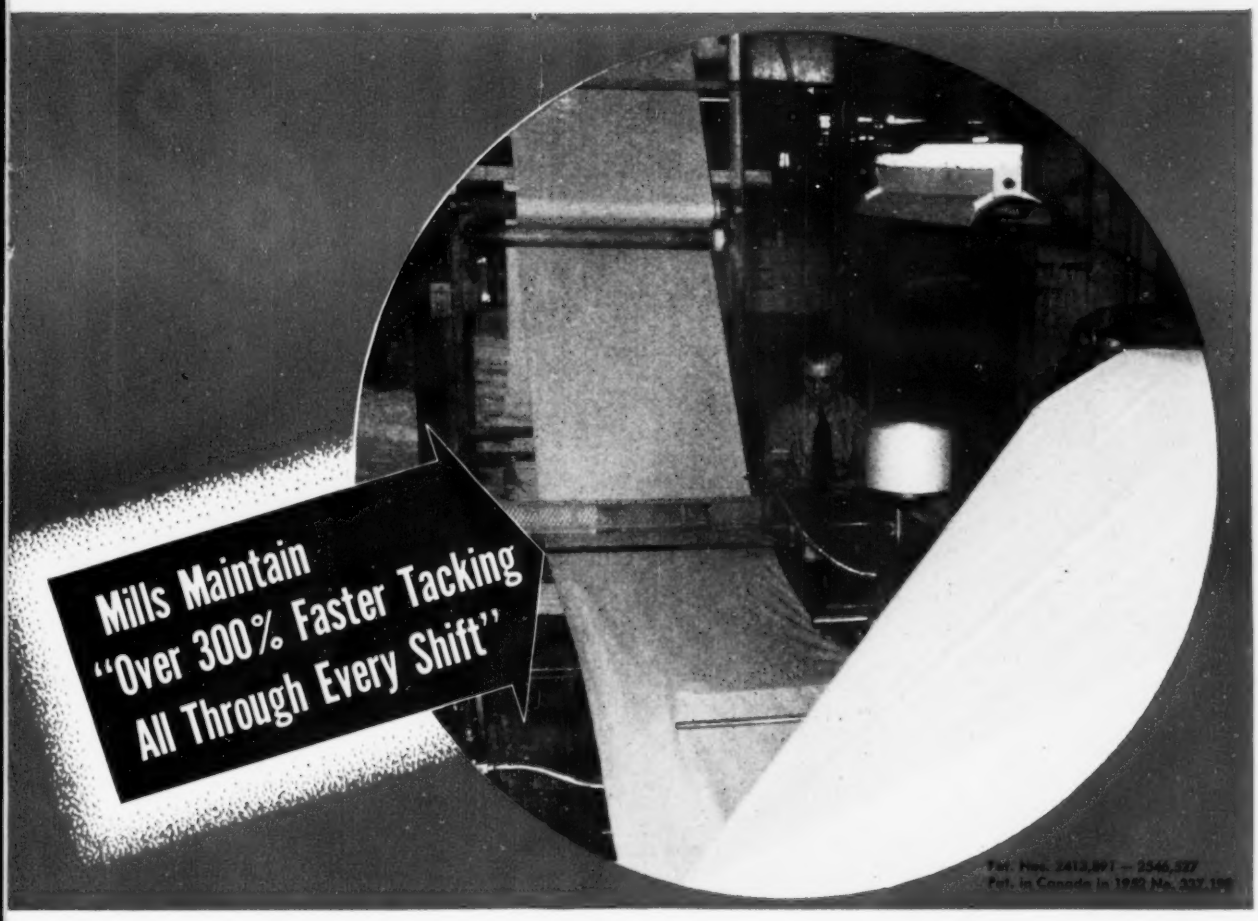
9 companies ordered 1 additional dryer
5 companies ordered 2 additional dryers
2 companies ordered 3 additional dryers
1 company ordered 4 additional dryers
1 company ordered 6 additional dryers

And, to our knowledge, *not one mill* that has tested Uxbridge Gentle-Air has thereafter installed a slasher dryer of any other make!

The reason for preferring Uxbridge Gentle-Air is simple. Like our other products listed below, it was designed from the mill man's point of view. Developed and perfected by our Research Department to fill our own requirements, with all operational problems worked out long ago, Uxbridge Gentle-Air is the first of the modern-type air dryers — and the only one that has been proved by the mills themselves in years of practical performance.

Uxbridge Gentle-Air helps your looms weave better profits — brings slasher room performance up into line with the productive capacity of your modern looms and spinning frames. Easy to install, it operates between the front and back ends of any conventional slasher — new or old. Write for descriptive bulletins, without obligation.

*** "Mill-Proved" Products — developed and manufactured by Uxbridge from the mill man's point of view.**
Uxbridge Chalker for filling winders • Uxbridge Easy-Rid Textile Chalk • Uxbridge Control Spray for pin drafters



Uxbridge *Automatic* Tacker*

Uxbridge Automatic Tacker takes over mechanically one of the meanest jobs in any textile plant. We designed it to tack any style or weight of fabric up to 94 inches wide (with modifications to handle wider fabrics), at an average speed of 45 yards per minute. But high output mills report *speeds up to 65 yards per minute* — bringing the tacking process completely into line with production rates of their other modern equipment. Compare these speeds with the average of 17 yards per minute for conventional hand tacking!

This rugged machine relieves the operator of all hand aligning duties — that seriously retard efficiency and output during a working shift. Cloth of varying weights and widths can be sewed together. Selvages are perfectly aligned by mechanical means, tacking in selvage is assured at all times by electrically actuated mechanisms. Imperfect tacking due to operator fatigue is eliminated.

SEND FOR BULLETIN: Write for details on this profitable precision-built new automatic tacker.

AT YOUR SERVICE: On request, our Engineering Department — the staff that originates "Mill-Proved" Uxbridge equipment — will study your tacking, slasher room, or related problems. No obligation, when you have us advise on ways to increase and improve production. Just tell us when you want an Engineer to call.

BACHMANN UXBRIDGE WORSTED CORPORATION
UXBRIDGE, MASSACHUSETTS

Representatives:
South—Ira L. Griffin and Son, P. O. Box 1576, Charlotte 1, N. C.
New England & Canada—James H. White, 40 Crystal Ave., Derry, N. H.
South America—Quimanil S/A, Anilinos Representacoes Matriz, Sao Paulo, Brazil

More warps & Better warps

Uxbridge "Gentle-Air" Dryer • Uxbridge Automatic Tacker

maximum
efficiency
and greatest
economy

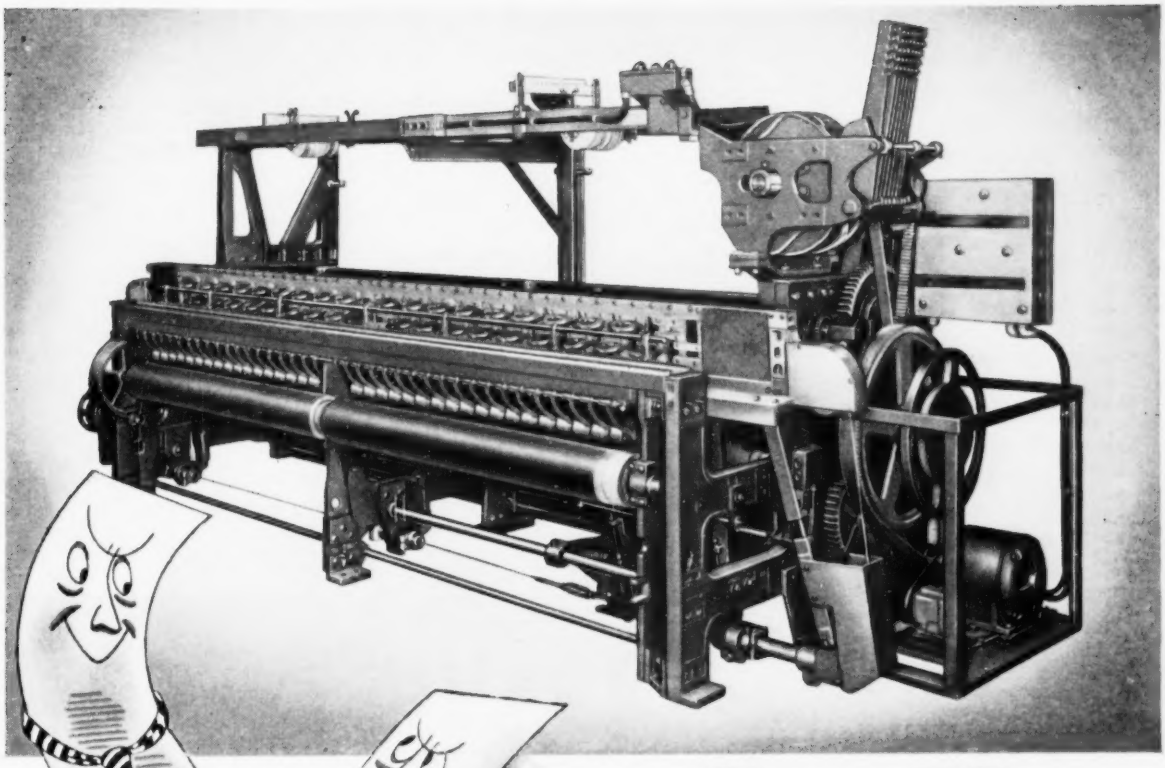
RAPIDASE®
for removal of starch sizes

SERIZYME®
for removal of protein sizes

for de-sizing

ask for our latest bulletin on
continuous de-sizing

WALLERSTEIN COMPANY, INC. 180 MADISON AVENUE, NEW YORK 16, N. Y.



C & K

is not

"Narrow-Minded"

about NARROW-FABRIC Looms

...we make them both—long AND short!

Yes, in this modern C&K design, the distance between loomsides can be varied to accommodate any number of shuttles and spacings, as required by individual mills.

And that's only the beginning of the list of newsworthy features of this important new loom:

• High speed with low maintenance • Rigidity of all-metal frame • One-piece magnesium laybeam • No clutch . . . loom crankshaft direct-connected to motor by timing belt • Wide range of weaving speeds by changing pulley on motor • Electric braking by plugging switch • Cam, head or dobby harness motion • And many other new C&K features.

Remember: This new C&K Narrow-Fabric Loom can be built with any number of shuttles and spaces ... either single-deck circular, double-deck circular, single-deck straight, double-deck straight, straight-shuttle 2-bank cross-shot, or single-deck 2-bank straight drop shuttle. *Never before in the history of narrow-fabric weaving has there been a loom of such versatility as this one.* So whatever your requirements for narrow fabrics ... tapes, webbing, elastic, ribbon, or what have *you? . . . this is your loom! Get in touch with C&K today.*

This invisible trademark stands back of the trademarks of the World's Finest Woven Fabrics

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I. • CROMPTON & KNOWLES OF CANADA, LTD., MONTREAL, QUE.

U S Bobbin Now Making Cotton Warper Beams

LAWRENCE, MASS. — It has recently been announced that a newly designed cotton warper beam with unique construction features has been made available to the industry by the 96-year-old U S Bobbin & Shuttle Co.

Not willing to build just "another warper beam", U S engineers gave considerable study to the possibility of making improvements in design and selection of materials, and they now state that their new cotton warper beams offer many advantages such as three-point support for the beam head; minimizing of "nesting" damage; reduction of weight, individual tie-rod tension-plate adjustment; greatly improved internal construction; improved tires; and use of more satisfactory materials.

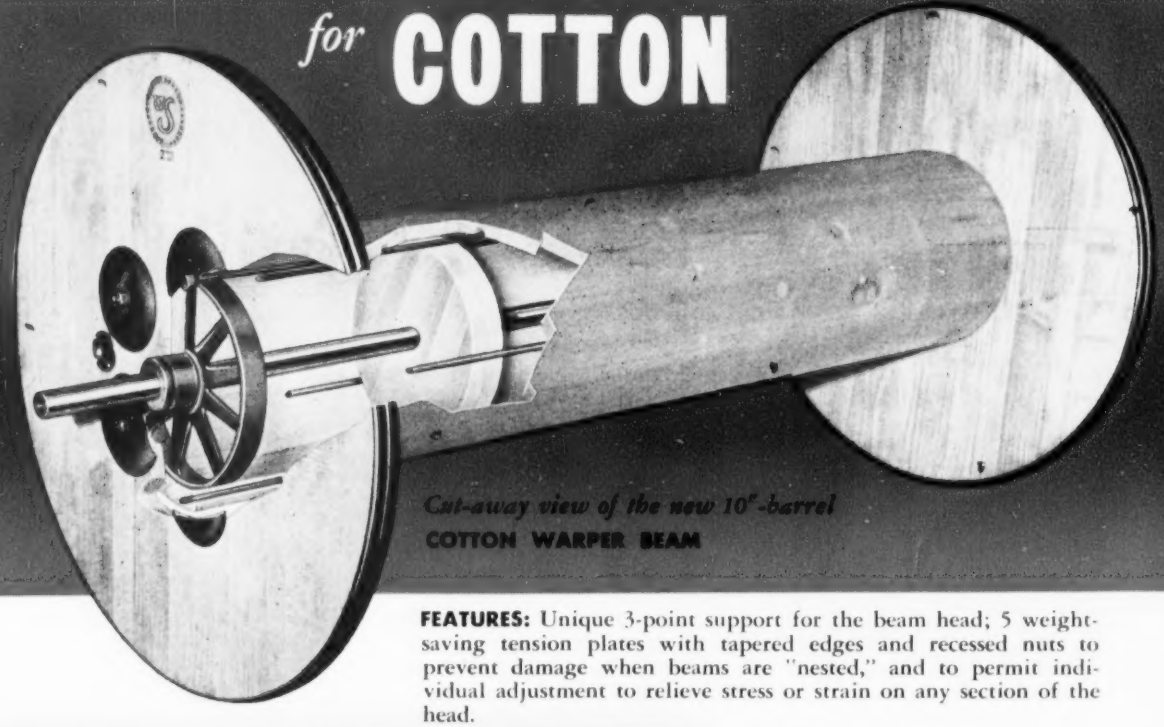
One of the most valuable of the new features is the unique design of the casting used in both ends of the barrel on all U S warper beams. The hub of the casting is formed with a substantial shoulder, from which the center of the head derives additional support during the build-up of the beam; whereas conventional castings do not prevent the tendency toward outward deflection of the head during this operation.

The company reports that the weight of the U S cotton beam has been materially reduced by using five newly designed cast iron tension plates instead of the single heavy cast iron plate commonly used on both heads of the beam. These five plates are bolted onto heavy steel tie rods and can be individually tightened to relieve stress or strain on any section of the head. Having a tapered edge, these tension plates cannot damage the beams when "nested" for storage.

The rim-protecting tire of the warper beam head is specially treated 3/32" steel, heavier than customarily used. The tire is grooved, heated and shrunk-fitted onto the head for a tighter assembly.

Excellent deliveries are being made from the newly-equipped plant of the U S Warper Beam Division, at Keene, N. H.

for **COTTON**



Cut-away view of the new 10"-barrel
COTTON WARPER BEAM

FEATURES: Unique 3-point support for the beam head; 5 weight-saving tension plates with tapered edges and recessed nuts to prevent damage when beams are "nested," and to permit individual adjustment to relieve stress or strain on any section of the head.

U S BOBBIN & SHUTTLE CO.

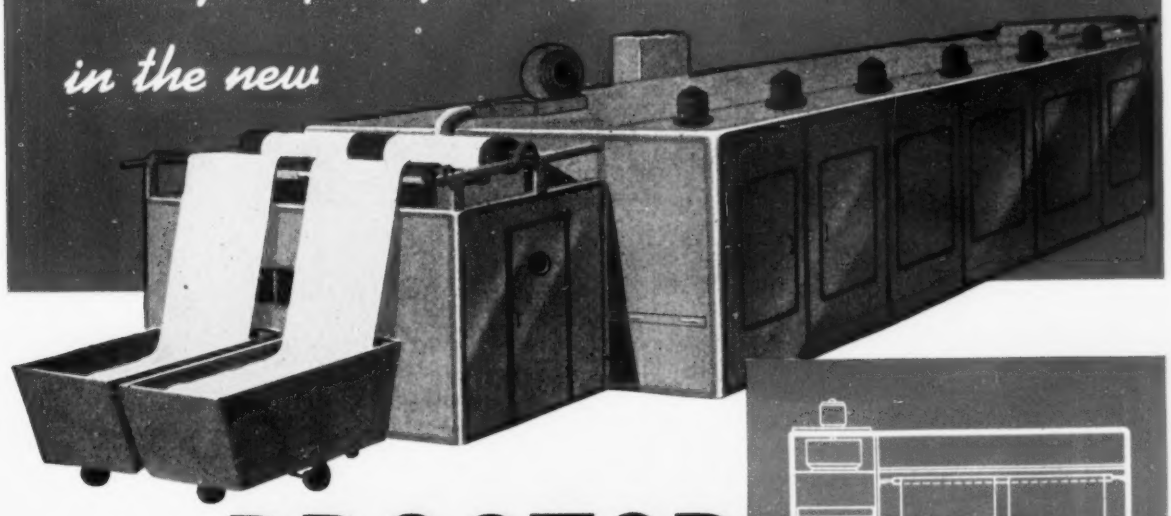
SEND TODAY for set of blueprints and Bulletin CWB, *revealing construction details of the new 10", and 12"-barrel U S Cotton Warper Beams, Beam Heads, and Tension Plates.*

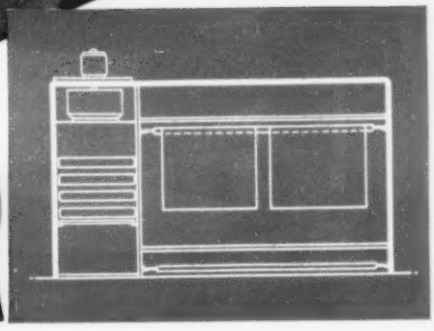
Manufacturing Plants
LAWRENCE, MASS. • GREENVILLE, S. C. • KEENE, N. H.

General Sales Office LAWRENCE, MASS.

Southern Division Headquarters So. Carolina National Bank Bldg., GREENVILLE, S. C.
CHARLOTTE, N. C. JOHNSON CITY, TENN. FORT MILL, S. C. LaGRANGE, GA.
PHILADELPHIA, PA. PROVIDENCE, R. I. MINNEAPOLIS, MINN.
DALLAS: O. T. Daniel, Textile Supply Co. LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave.
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

The greatest drying uniformity ever offered in any loop dryer is guaranteed in the new





PROCTOR LOOP DRYER-CURER

By utilizing an entirely new concept of air movement, the new Proctor Loop Dryer-Curer guarantees you the greatest drying uniformity ever offered in this type of equipment.

It further results in maximum production with minimum power requirements.

In addition to more uniform drying for a wide variety of fabrics—the new design provides these advantages:

1. Cleaning time is reduced to an absolute minimum through the proper application of lint screens—and locating heating coils in a readily accessible position.
2. Expensive maintenance of couplings and belts is completely eliminated through the use of direct motor driven fans.
3. Greater cleanliness is promoted inside the dryer through the use of an entirely new type of panel construction. This construction eliminates unnecessary structural members inside the dryer—and results in an exterior that is smooth and sleek in appearance.

The design of the new Proctor Loop Dryer-Curer has been standardized for shorter delivery. Where necessary the standard design is adapted to meet individual plant requirements.

Use the coupon below for more information.

Please let us have information on
the NEW PROCTOR LOOP DRYER-CURER

Name_____

Company_____

Address_____

City_____ State_____

610

PROCTOR & SCHWARTZ · INC · 610 TABOR ROAD · PHILADELPHIA 20 · PA ·

Gaylord Boxes That Proudly Bear Your Name Reflect the Quality of Your Product

Don't overlook the advertising value of attractive, colorful shipping containers in your merchandising and selling plans.

Sales-minded manufacturers prefer distinctive Gaylord Boxes. Their clear printing and over-all quality are effective sales stimulants for the product inside—through every step of distribution.

For prompt service consult the Gaylord sales office nearest you. It's listed in the classified pages of your phone book.

Gaylord Boxes

Their unseen quality gives you an extra margin of safety.

GAYLORD CONTAINER CORPORATION

General Offices: ST. LOUIS • Sales Offices Coast-to-Coast

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y. March, 1953

Avisco Chemicals Give Textile Mills Solutions To Static Problems

Major static problems in textile processing—particularly in dyed fibers, yarns and fabrics—are being met with the help of Avisco textile chemicals. They are easily applied in the final rinse after dyeing, eliminating later handling operations.

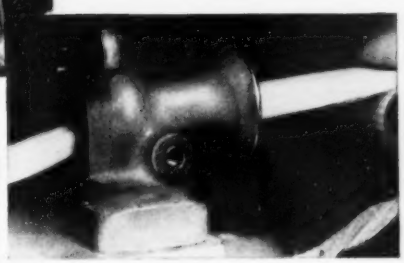
Besides controlling static, Avisco textile chemicals provide excellent fiber lubrication and cohesion in carding, gilling, drafting and combing.

They are non-ionic, and completely dispersible in water. They are highly stable to acids, salts, and mild alkalies, as well as compatible with dye liquors, sizes, and resins used in finishing. In addition, Avisco treating agents are permanently stable in storage, do not volatilize during drying, and do not affect shades or light and wash fastness.

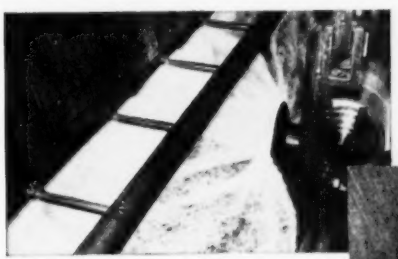
Other Avisco textile chemicals also in demand for their outstanding qualities are a rayon stabilizer, a permanent rayon finish, and a non-ionic synthetic detergent.

Representatives of Avisco's Textile Research Department are working closely with mills to apply static-control chemicals, as well as chemicals developed for other textile problems. They will be glad to assist you. Write us about your specific needs.

Left, drafting untreated synthetic fibers.



Right, same fibers treated with Avisco Chemicals. There is practically no fly. Down time is reduced, uniformity of later processing assured.



Left, untreated fiber going through worsted card.

Right, the same operation after treatment with Avisco textile chemicals. Exceptionally effective static control is achieved.

Avisco Textile Chemicals were developed in conjunction with and are manufactured by Atlas Powder Company, Wilmington, Delaware.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's first producer of man-made fibers

RAYON ACETATE VINYON* FILATEX®

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

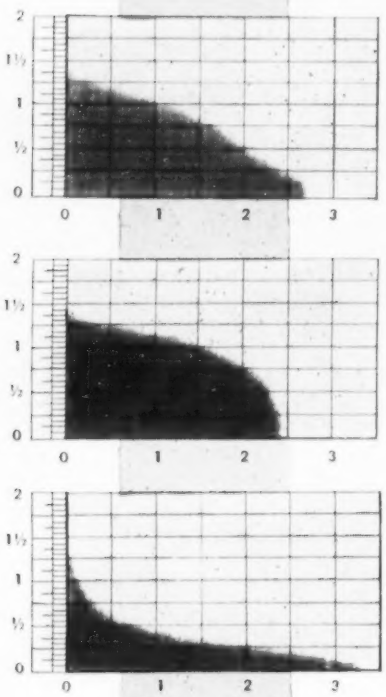
*TMC & CCO

When you get down to brass tacks...

here's what a comber should do!

It should:

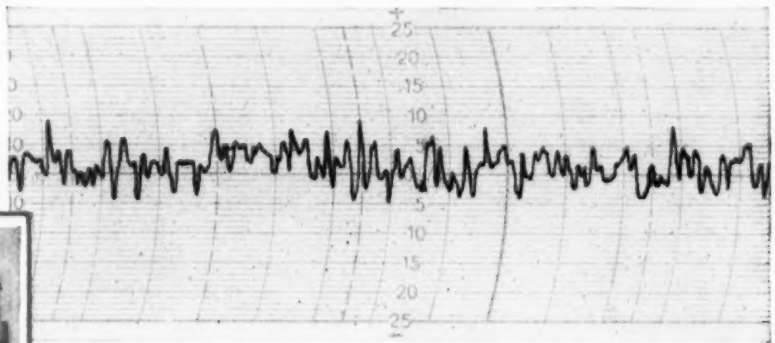
- Produce high quality sliver with low variation.
- Reduce neps to the lowest possible amount. The ratio will vary from 3:1 to 6:1 depending on the staple and the amount of noil.
- Remove practically all of the short fibers and few or none of the long.
- Produce at a high rate compatible with space required, investment costs, and total combing expense.
- Operate with a low productive cost per pound.
- Be easy to adjust, and hold the settings between overhauls.
- Run at high efficiency, requiring minimum expense to maintain, lubricate, and repair.
- Function so simply and smoothly that operator efficiency is high.



The above fiber arrays show the quality of work done by the Whitin "J" Comber. At top, ribbon lap; center, combed sliver; at bottom, noil. Note that practically all of the short fibers have been removed and only a very few long fibers combed out.

...and that's just what the WHITIN model "J" does!

For all-round efficiency, versatility, and superiority of design, it has been acclaimed in both the United States and Europe. Thoroughly tested in mill installations ranging from a few to as many as 200, the Model "J" Comber is recognized as the finest comber yet developed.

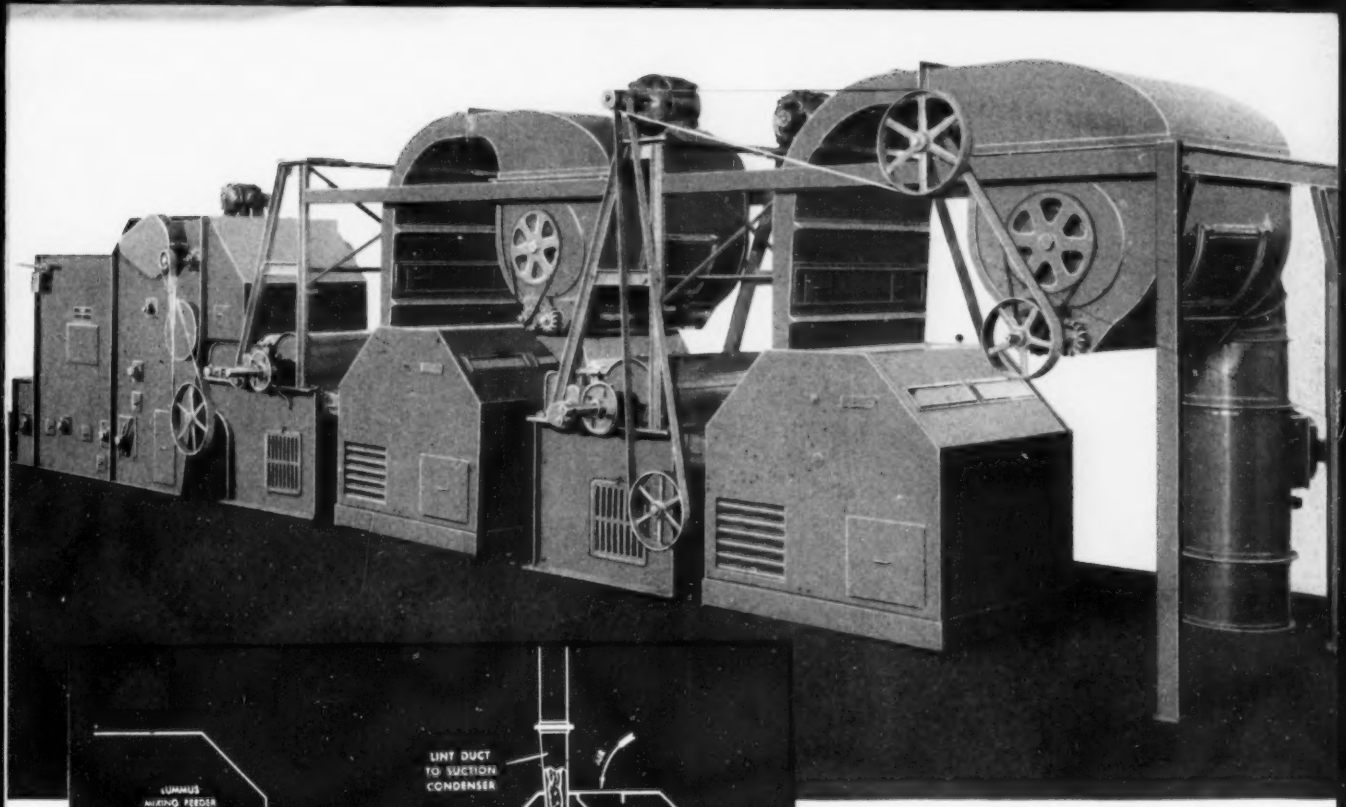


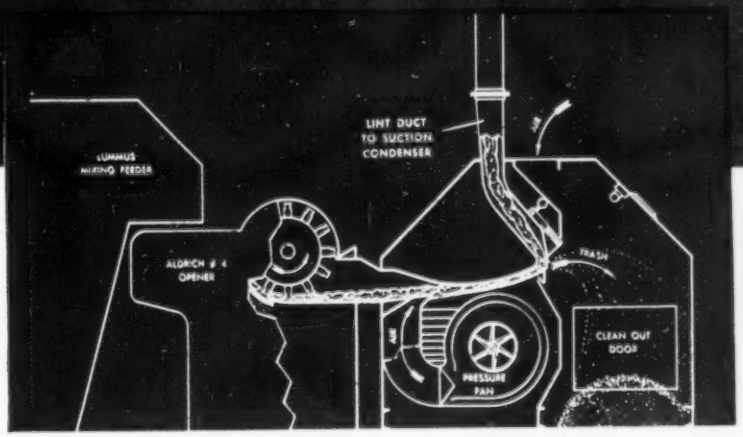
Section from Uster graph made in mill test, Whitin "J" Comber sliver. The stock is 55 grain Pima. Test data: average variation, 17.6 per cent; maximum variation, 30 per cent.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, N. C. • DEXTER, ME.





Super-Jet takes out trash by air. No saws . . . only enough beating to open the cotton. No damage to fibre, or breaking up of trash. Lint delivered cleaned and thoroughly opened . . . with no curling, no stringing, no increase in nep-count.

WITHOUT LOSS OF SPINNABLE FIBRE TANDEM SUPER-JET MAKES COTTON CLEAN

Tandem Super-Jet cleaning system as shown here, not only does not take out good lint, but can be set to remove any desired type of trash. Super-Jet is now in operation in a long list of mills, whose cotton ranges from waste mix and good ordinary on up to strict middling. In these mills Super-Jet has proven itself as the first really new idea in lint cleaning in the last 75 years.

Super-Jet cannot damage fibre because it has no moving parts, and does its work with two air-currents. It eliminates the heavy cost in high-priced cotton of fibres damaged by cleaning, and good, spinnable lint thrown out with the motes.

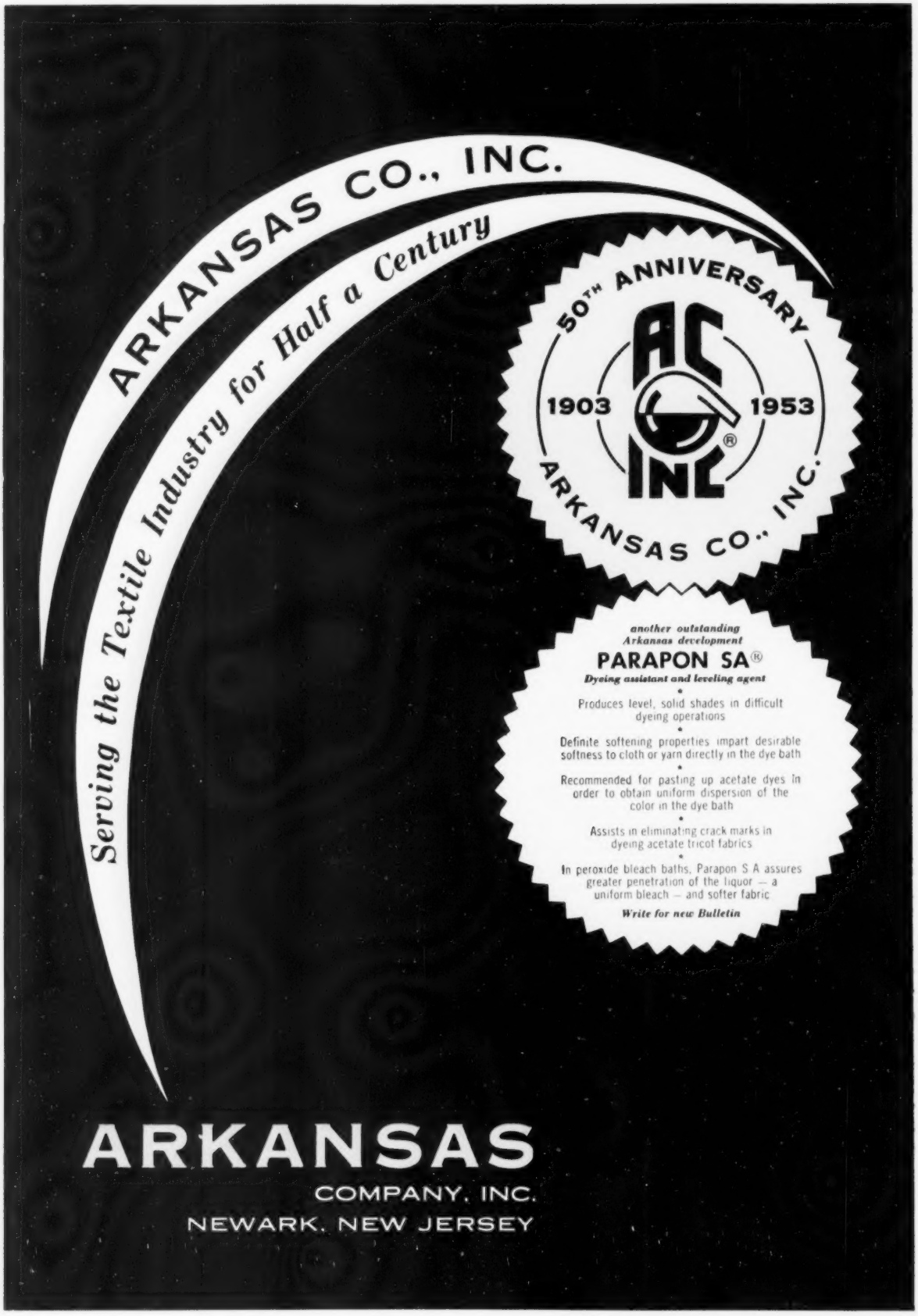
Super-Jet takes out motes and neps; bark, shale, stems, grass and other loose trash without breaking them up into motey material or pepper trash. Used in Tandem with the opening equipment shown, the cleaning system turns out cotton ready for delivery direct to the pickers and so dust-free that you will notice that your card and spinning rooms are cleaner after installation of Tandem Super-Jet.

We have been given permission to invite you to visit mills with Super-Jet installations, running the same type of cotton you use...and will be glad to arrange such visits at your convenience.

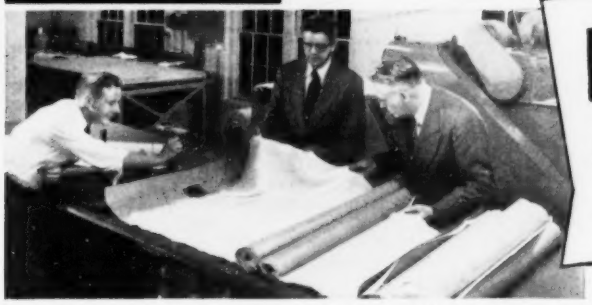
ALDRICH-LUMMUS CLEANING SYSTEM

Made by LUMMUS COTTON GIN CO.
Columbus, Ga.
and
ALDRICH MACHINE WORKS
Greenwood, S. C.

Sold and Installed by Aldrich Machine Works Greenwood South Carolina


ARKANSAS CO., INC.
Serving the Textile Industry for Half a Century
50TH ANNIVERSARY
1903
1953
AC
INC.
ARKANSAS CO., INC.
another outstanding
Arkansas development
PARAPON SA®
Dyeing assistant and leveling agent
Produces level, solid shades in difficult dyeing operations
Definite softening properties impart desirable softness to cloth or yarn directly in the dye bath
Recommended for pasting up acetate dyes in order to obtain uniform dispersion of the color in the dye bath
Assists in eliminating crack marks in dyeing acetate tricot fabrics
In peroxide bleach baths, Parapon S A assures greater penetration of the liquor — a uniform bleach — and softer fabric
Write for new Bulletin
ARKANSAS
COMPANY, INC.
NEWARK, NEW JERSEY

WASTE FIBERS



Customers examining random web made from their own fibers.

RANDOM WEBS

MADE FROM YOUR FIBERS TO SEE...TEST...PRODUCE

STAPLE FIBERS

Part of the hundreds of different fibers and fiber blends sent in by prospects.

You can develop new products from random webs made with your waste or staple fibers, and so it will pay you to contact us. Twenty pounds of stock with specifications as to blend, weight, and quality of web desired will give you ample material with which to experiment.

LAMINATED FIBERS

Customer's sample web coming off the delivery apron of the Rando Webber.

A FEW PRODUCTS FROM RANDO-FEEDER · RANDO-WEBBER

- **Heavy mats (resin bonded or punched felt-type)**
  - a) floor backing
  - b) rug cushion and backing
  - c) insulation
- **Felt (pressed type)**
  - a) automotive grade
  - b) industrial grade
  - c) clothing accessory items
- **Industrial Non-Woven Fabrics**
  - a) laminate reinforcements
  - b) reinforcements for molded plastic articles
  - c) base for coated fabrics
  - d) tapes
  - e) filters
- **Wadding**
  - a) automotive grade
  - b) upholstery backing
  - c) packing materials
  - d) casket linings
  - e) clothing interlining
  - f) quilting interlining
  - g) surgical goods
- **Household Non-Woven Fabrics**
  - a) tapes
  - b) disposable household items
  - c) surgical items
  - d) disposable personal items

SYNTHETIC FIBERS

Critical examination of random web for texture, quality and uniformity.

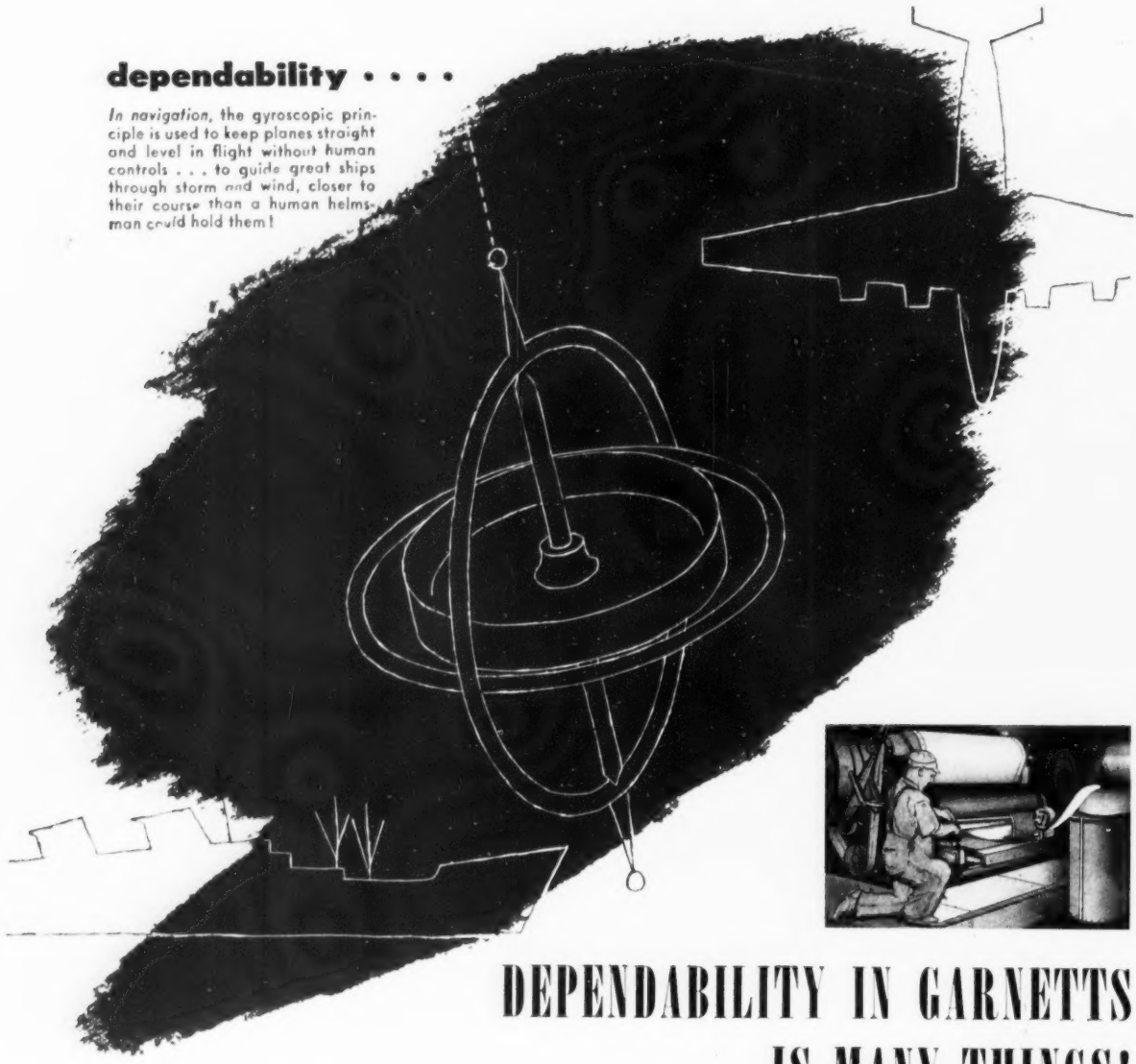
WRITE for new Bulletin No. 102 suggesting products and ways to handle webs.

TEXTILE DIVISION

CURLATOR

CORPORATION

EAST ROCHESTER, NEW YORK


dependability . . . .
In navigation, the gyroscopic principle is used to keep planes straight and level in flight without human controls . . . to guide great ships through storm and wind, closer to their course than a human helmsman could hold them!

DEPENDABILITY IN GARNETTS IS MANY THINGS!

The dependability of Star Woolen's garnetts has become as familiar to the textile industry as the gyroscopic principle has become to navigation, but our dependability is not merely mechanical. It results from our tradition of integrity, from years of experience and from the blending of constant laboratory controls and expert techniques into a flawless production system.

You can ask us for a particular blend of wool and nylon (or any blend of any fibres) and you'll get it 100% as specified, without variation, *with absolute continuity of supply,* time after time. "Why blend your own?" we have asked the industry, and growing numbers of leading textile men are unloading their blending problems on us. We can free *you* from technical anxieties, save you thousands of dollars annually . . . *for we always deliver exactly as specified, lot after lot!*

Send us your requirements; let us know your blending problems. We'll rush you the full, profitable information you want!

STAR WOOLEN co.

World's Largest Producers of Nylon and Other Synthetic Garnets

Cohoes, New York

A color to grow with!

All three of the washable play suits you see here started out in the same size, but they are expandable. By letting out tucks and cuffs, each one will last through two years of a child's growth. Each will get more than twice the sun, suds and perspiration of regular play suits. But with Du Pont vat dyes, their colors stay fresh and bright throughout their whole extended life.

This is just one example of the more durable, longer-lasting garments that are drawing manufacturers' attention to Du Pont's equally long-lasting vat dyes. These dyes include Du Pont PONSOL* and LEUCOSOL* (anthraquinone-type dyes) and SULFANTHRENE* (indigoid and related dyes). Our technical staff will be glad to work with you in your choice and application of these uniform, deep-penetrating vat colors. E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Del.

*REG. U. S. PAT. OFF.

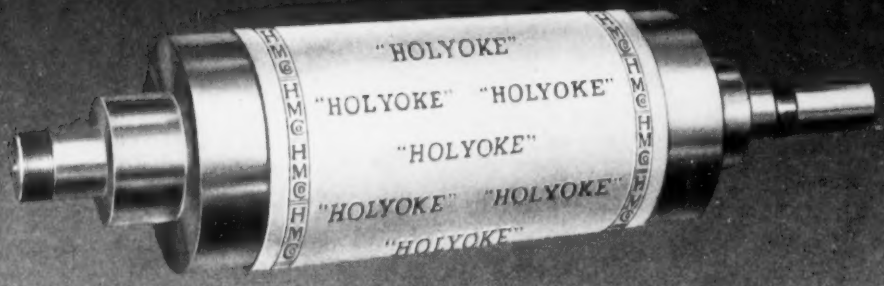
Du Pont Dyes

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

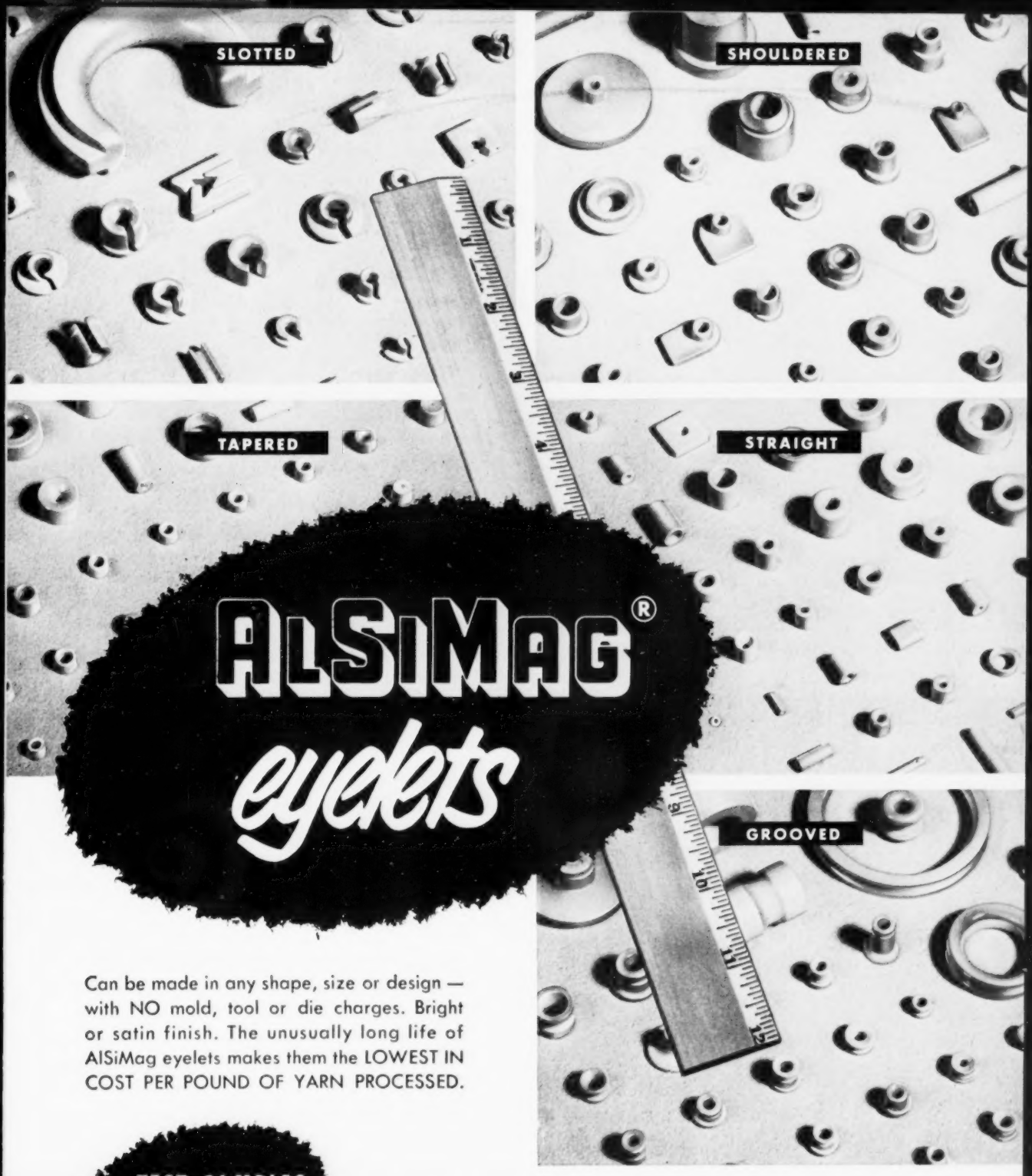
"HOLYOKE"
EMBOSSING ROLLS



HOLYOKE MACHINE COMPANY

EMBOSSING ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT

HOLYOKE, MASSACHUSETTS



ALSIMAG® *eyelets*

Can be made in any shape, size or design — with NO mold, tool or die charges. Bright or satin finish. The unusually long life of AlSiMag eyelets makes them the LOWEST IN COST PER POUND OF YARN PROCESSED.

TEST SAMPLES AVAILABLE

51ST YEAR OF CERAMIC LEADERSHIP

AMERICAN LAVA CORPORATION

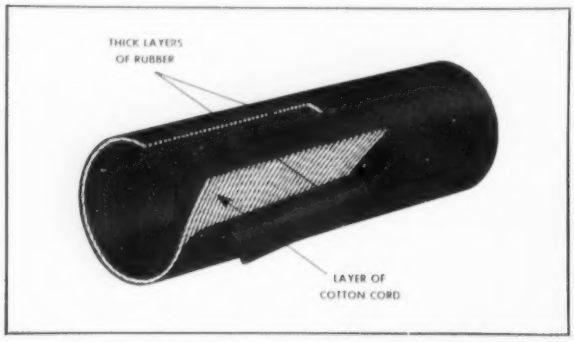
CHATTANOOGA 5, TENNESSEE

SALES ENGINEERS: NORTH AND EAST: Jay S. Gosnell, American Lava Corporation, 671 Broad St., Newark, N. J., Mitchell 2-8159. SOUTHEAST: Joe E. Spearman, American Lava Corporation, 401 Belton St., Charlotte, N. C., 4-1525. ALL OTHER AREAS: J. B. Shacklett, American Lava Corporation, Chattanooga 5, Tenn., 5-3411.

You make fewer apron changes with these aprons on your frames

On most frames, Armstrong's Accotex® Aprons will give 6 to 8 years of continuous, three-shift service. In fact, several mills report these aprons have given more than 8 years of trouble-free spinning.

The answer to this kind of performance is found in their patented three-layer construction (below). It produces a durable, seamless, and flexible apron with excellent yarn control qualities.



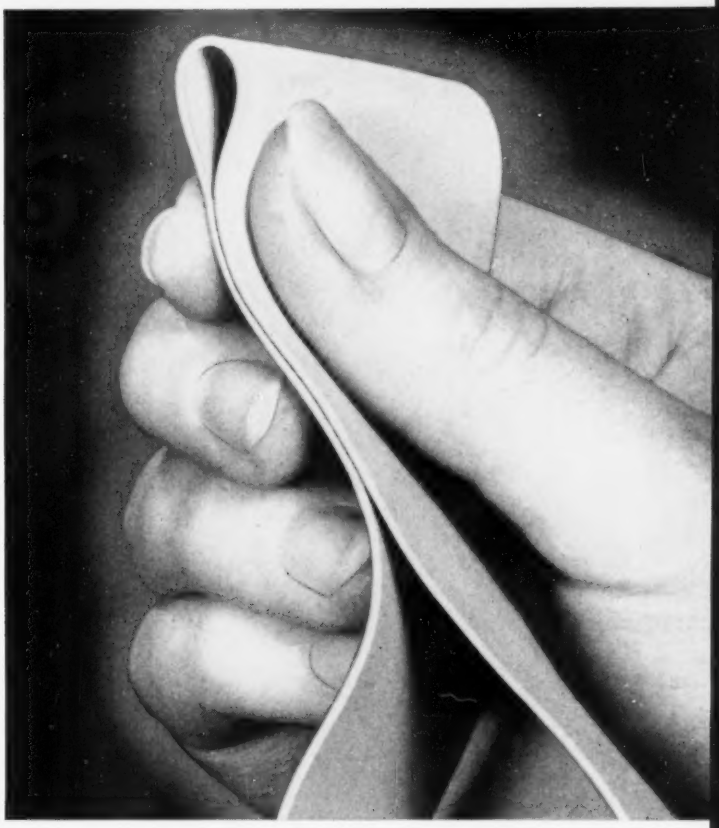
The outer layer of each Accotex Apron is made of a synthetic rubber, specially compounded for toughness. The surface is given a smooth finish, then treated to stay smooth for years.

Sturdy cotton cords form the middle layer. These cords prevent stretching and curled edges. The inner layer, which must take the abrasion of millions of trips over the nose bar, is also made of a very durable, long-wearing synthetic rubber.

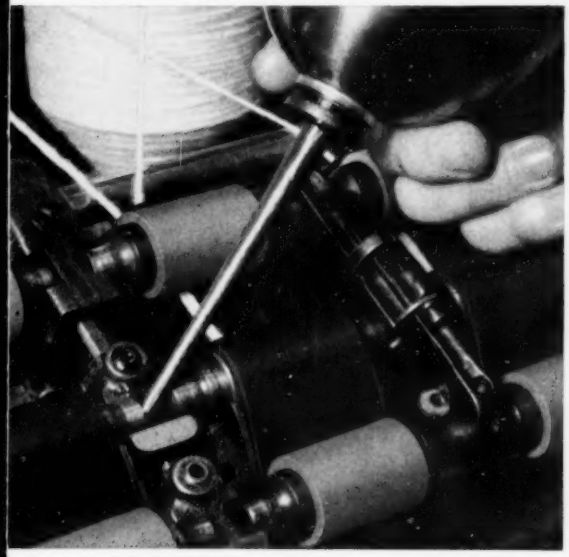
Vulcanized together, the three layers form a one-piece apron without a seam or weak spot.

It's easy to arrange for testing Accotex Aprons on your own frames. Just call your Armstrong man or write Armstrong Cork Company, Textile Products Dept., 3603 Arch St., Lancaster, Pa. All Armstrong textile products are available for export.

SEAMLESS: Mill after mill has discovered that this smooth, continuous surface means even drafting, with fewer irregularities in the yarn.



SUPER FLEXIBLE: NO-750 Accotex Apron is seamless and extremely flexible. It hugs the nose bar tightly, giving a smooth slip-roll action.



OIL RESISTANT: Accotex Aprons don't absorb oil or soften from exposure to oils, dyes, and commonly used textile solvents. They run clean.

SMOOTH FINISH: Each Accotex Apron is given a patented treatment that makes the surface satin smooth, clean running, and scuff resistant.

ARMSTRONG'S ACCOTEX APRONS

one of Armstrong's complete line of textile mill supplies

How Much Per Traveler-Pound?

The true test of a traveler is the number of pounds of top quality yarn which can be spun or twisted with it before it wears out. The more yarn produced, the lower your cost per traveler-pound.

Millmen who keep a sharp eye on production costs always judge travelers on this traveler-pound rating. And that's why so many choose Victor Travelers for spinning or twisting.

Victors consistently cost less per traveler-pound for two reasons. First, because there are no better travelers made, by any test of quality and uniformity. Second, because Victor Service Engineers, all mill-trained men, can quickly grasp your special problems, and come up with the right answer.

They can not only recommend the *right* traveler, but can often make other suggestions for improving your quality and production, —whether you are running conventional fibers, synthetics, or blends.

Plan now to talk to a Victor man about your costs per traveler-pound. Write, wire, or phone the nearest Victor office . . . for prompt service.

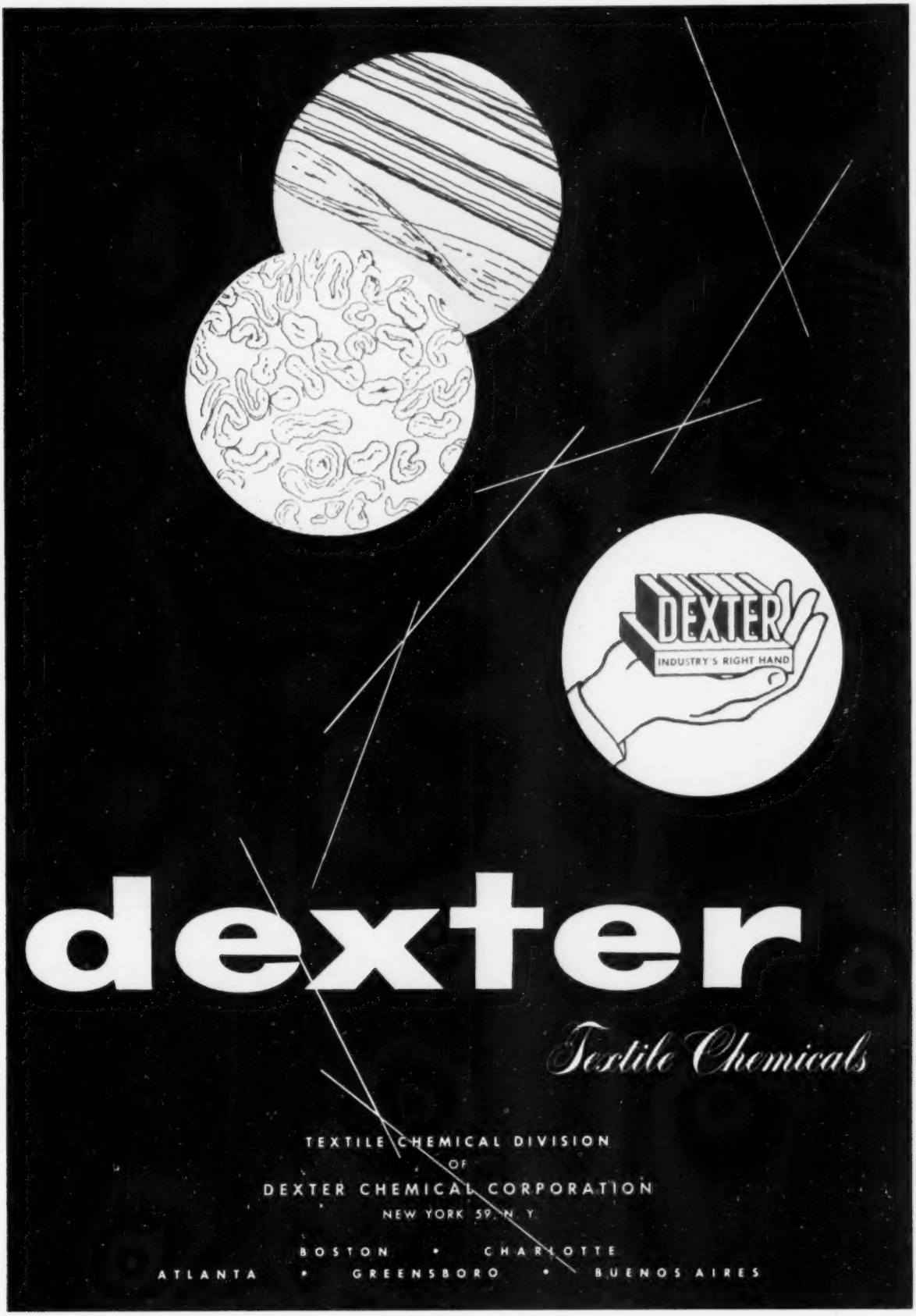
•

VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 1-0737

GASTONIA, N. C. . . . . 358-364 West Main Ave. . . . . Tel. 5-0891


DEXTER
INDUSTRY'S RIGHT HAND
dexter
Textile Chemicals
TEXTILE CHEMICAL DIVISION
OF
DEXTER CHEMICAL CORPORATION
NEW YORK 59, N. Y.
BOSTON • CHARLOTTE
ATLANTA • GREENSBORO • BUENOS AIRES

LEADING THE KNIT PARADE

Gibbs

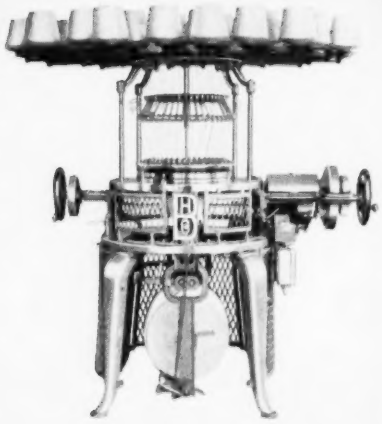
UNDERWEAR COMPANY
PHILADELPHIA 34, PA

To parents all over America the name GIBBS means top value and quality in underwear for children of all ages. The "Gibbs Kids" love to play and frolic in these comfortably-fitting, shrink-resistant garments.

It takes modern, high production knitting machines to produce garments that are tops in value and quality. That's why so many Gibbs garments are knitted on Brintons—machines that since 1888 have produced the finest fabric for the great names in knitwear.

Engineered for the World's Greatest Knitwear Makers

BRINTON
CIRCULAR KNITTING MACHINES
KENSINGTON AVE. & M ST., PHILA. 24, PA., U.S.A.



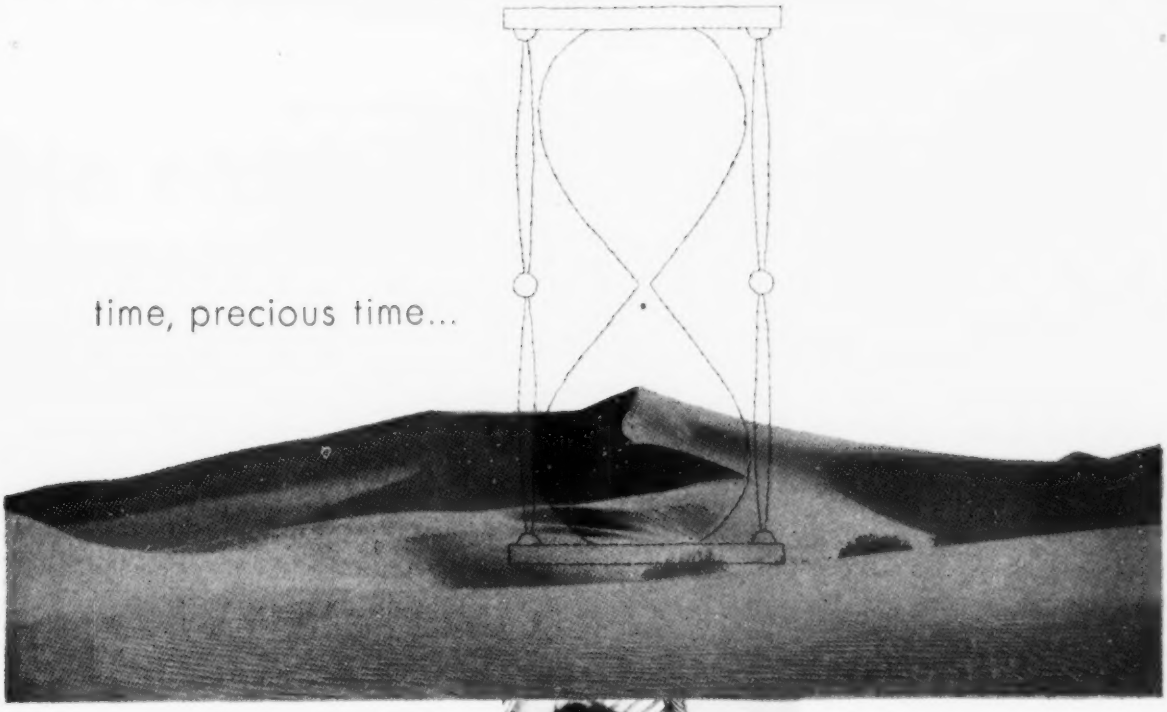
Model MERCEDES Style RMP

This high production revolving cylinder machine makes a wide variety of articles. It produces that fine balbriggan or plain jersey fabric for either underwear, basque, polo or T-shirts.

It has no special attachments—it's easy to understand and operate. It operates continuously, too, by simply using double cones on the stationary bobbin table.

Write for more detailed information on the MERCEDES, a machine of proved performance with average production of 75 to 80 yards per hour on every machine size.

time, precious time...



No gift so precious as the gift of time. Time to relax. Time to have fun. Time to think. Time to grow. And no contribution of modern science has given modern women a richer bounty of time in the hand than Du Pont's modern-living fibers. Nylon, "Orlon," "Dacron"... here are fibers that widen the textile world's horizons, fibers that open the door to what your customers want today. Fabrics that save precious minutes day-long, year-long—fabrics that wash faster, dry faster, need less ironing, fabrics that wear longer, save on shopping, fabrics keyed to the busy pace of today's lives . . . engineered *right in the fibers* to enrich modern living with the boon of extra time. You can count on Du Pont's vast fiber research to answer your problems in developing and selling fabrics keyed to the way your customers live today!

Du Pont's Modern-Living Fibers

NYLON | RAYON | ACETATE | ORLON® ACRYLIC FIBER | DACRON® POLYESTER FIBER

DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

How does U. S. Rubber make quills water-resistant?

Here's how: By making them of Uscolite, the remarkable new rubber-plastic compound. Quills made of this wonderful material not only are resistant to water, but they retain their shape throughout their entire service life. They last two to three times longer than wooden quills.

Not only that, but Uscolite quills do not chip or splinter, nor do they soften at the tip when run through conditioning agents. They have high-surface friction, which means excellent holding properties which eliminate or minimize sluffing of the yarn.

Like every other product in the complete line of United States Rubber Company's textile mill specialties—all the way from warp tubes to cop butts, Uscolite quills *last longer* and permit a *higher quality* of textile output. Write for more information today.

PRODUCT OF U.S.RUBBER SERVING THROUGH SCIENCE

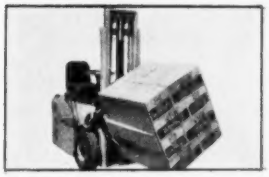
UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION • ROCKEFELLER CENTER, NEW YORK 20, N. Y.

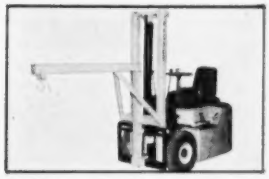
"Ton Tamer"...for every industry!

Hyster 20 Attachments "tame" a ton in any form

LOAD GRAB—for bales, barrels

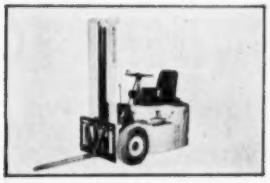


LOAD GRAB—for crates, cartons

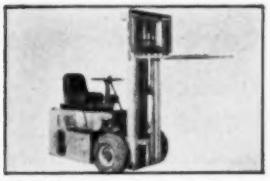


BOOM—for crane work

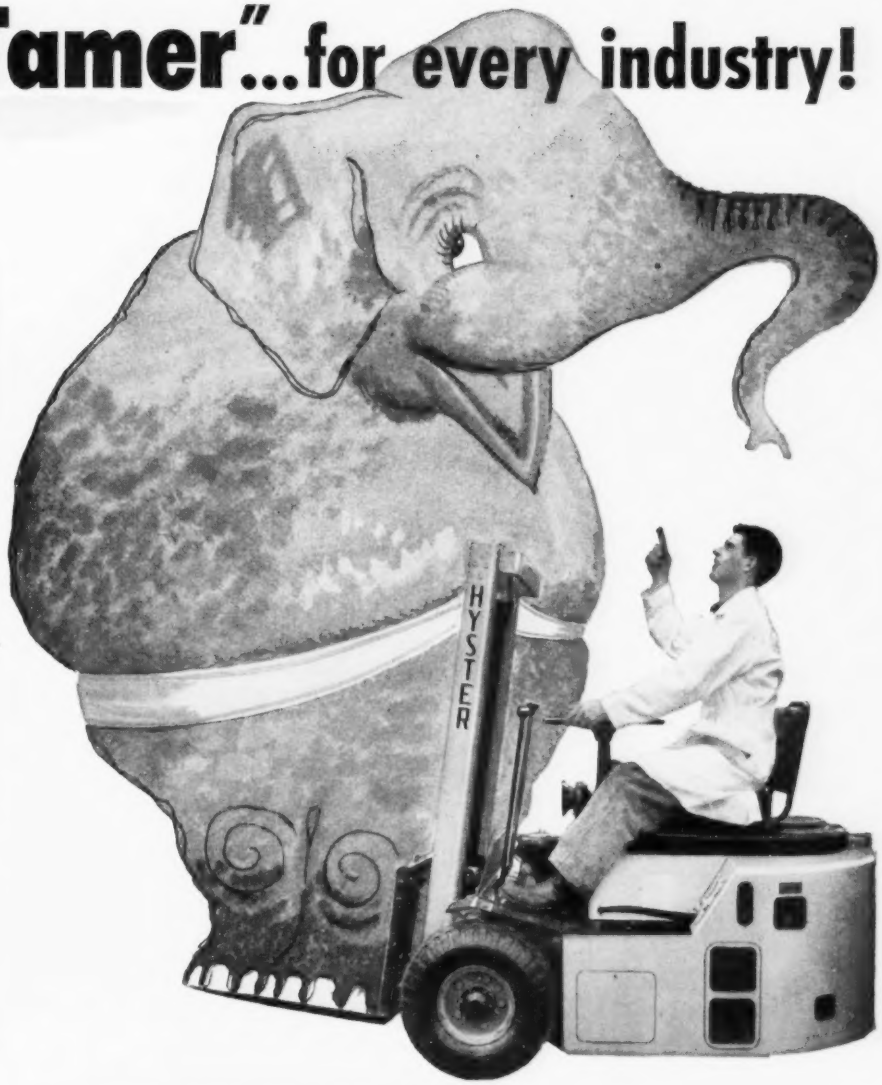
SCOOP—for loose materials



RAM—for toroidal shapes



FREE LIFT—for stacking under low clearances



If your load weighs 2000 lbs. or less, the **HYSTER** 20 Lift Truck is the surest way to more profit!

Take a good look *now* at the load *you must* handle more efficiently if you are going to cut costs. Whether it's bales, bags, bricks, bottles, bundles, boxes or barrels, the Hyster 20 can move your ton more profitably than in any other way—as attested by Hyster records in every industry. *The Hyster 20 is more than a lift truck with two forks for pallet work.* With the proper attachment, it can be adapted to "tame" tons of otherwise hard-to-handle materials. The Hyster 20 is the best materials handling capital investment you'll ever make because it is easier to maintain—and stays young for years. Write today for Catalogs 1198-C and 1206 to Hyster Company, 2902-57 N. E. Clackamas, Portland 8, Oregon.

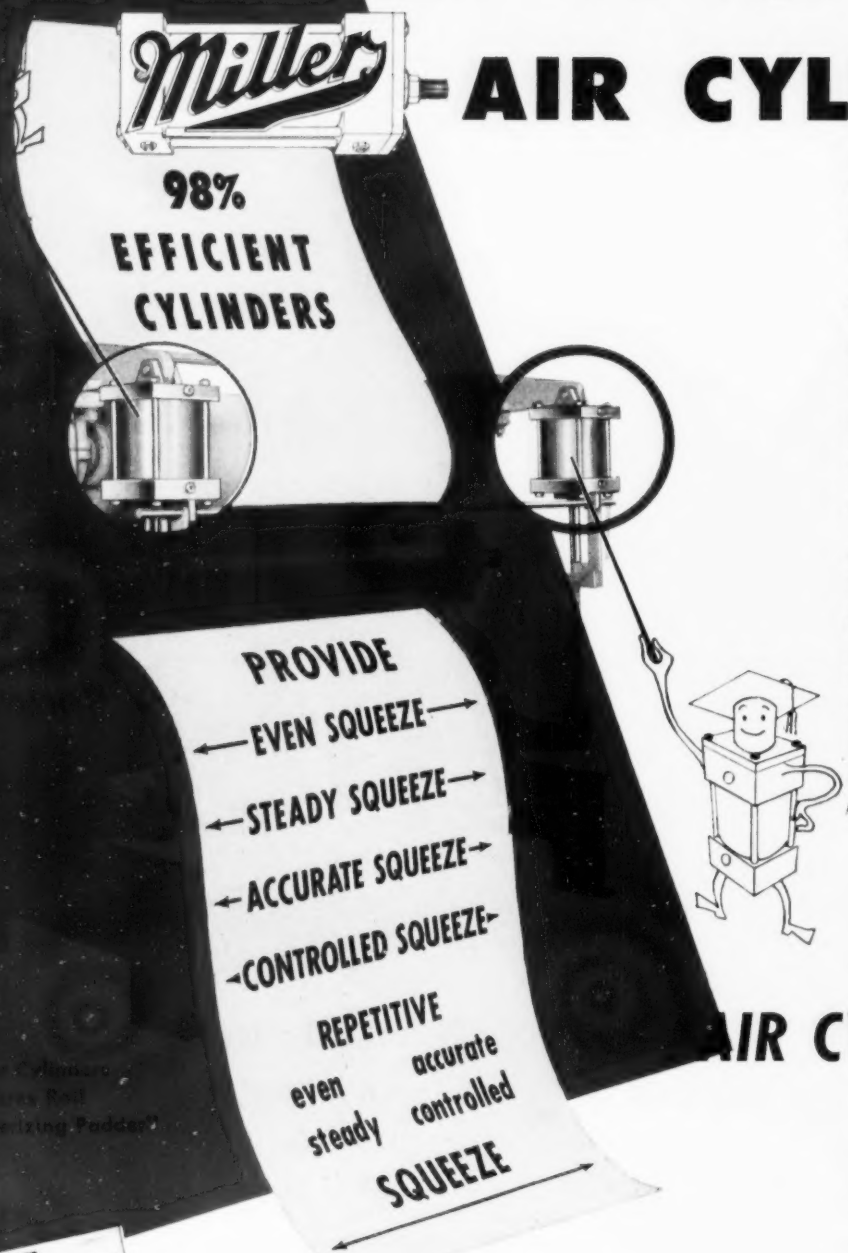
THERE'S PROFIT IN HYSTER LIFT AND PULL

HYSTER

Be sure to call HYSTER before you buy any LIFT TRUCK

HYSTER COMPANY FOUR PLANTS: PORTLAND, ORE., PEORIA, ILL., DANVILLE, ILL., NIJMEGEN, THE NETHERLANDS

EQUALIZE THE SQUEEZE with Miller AIR CYLINDERS



Two Miller Air Cylinders (one at each end of the pressure roll) provide the steady, even "squeeze" so essential for the pressure rolls of Textile machinery.

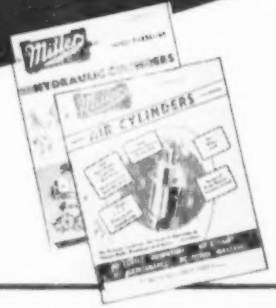
The variation in friction co-efficiency in these cylinders is practically negligible. Thus, whether the pressure is to be constantly held or reapplied as required, the "twin" cylinders can be depended upon to react simultaneously and in perfect unison to the slightest adjustment. Also, any desired pressure on the rolls can be duplicated and maintained at will.

These top performance qualities are "built-in" features of Miller Standard Air Cylinders proven 98% plus efficient (at 80 psi). The Miller Non-Adjustable Seals assure *consistency* of performance throughout cylinder life. This consistency is further guaranteed over exceedingly long periods of time by such standard Miller features as solid steel heads and caps, hard chrome plated piston rods, dirt wiper seals and non-corrosive cylinder barrels.

Miller

AIR CYLINDERS FOR

- **Bullet Padders**
- **Washers**
- **Steamers**
- **Rope Squeezers**
- **Bleaching Equipment**
- **Dyeing Equipment**
- **Other Textile Machinery**



WRITE FOR CYLINDER BULLETINS A-105 and H-104

Complete Miller cylinder line includes: air cylinders, 1½" to 20" bores, 200 PSI operation; low pressure hydraulic cylinders, 1½" to 6" bores for 500 PSI operation, 8" to 14" bores for 250 PSI; high pressure hydraulic cylinders, 1½" to 12" bores, 2000-3000 PSI operation. All mounting styles available.

SALES AND SERVICE FROM COAST TO COAST

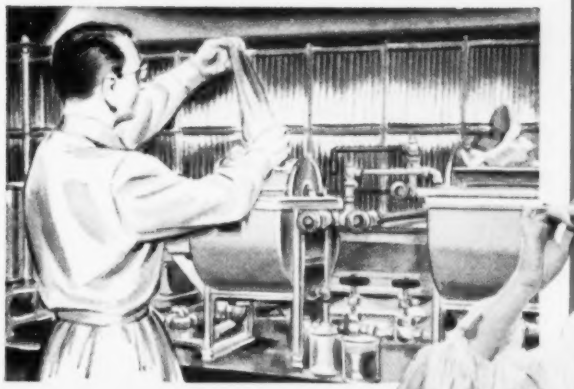
CLEVELAND • YOUNGSTOWN • DAYTON • PITTSBURGH • PHILADELPHIA • BOSTON • HARTFORD • NEW YORK CITY • BUFFALO • ST. PAUL • GRAND RAPIDS • DETROIT • FLINT • FORT WAYNE • SOUTH BEND • INDIANAPOLIS • MILWAUKEE • LOUISVILLE • KANSAS CITY • SEATTLE • LOS ANGELES • SAN FRANCISCO • BALTIMORE • DENVER • ST. LOUIS • MOLINE • CHICAGO • HOUSTON • TORONTO, CANADA and OTHER AREAS

Miller

MILLER MOTOR COMPANY

2042 N. Hawthorne Ave., Melrose Park, Ill.

AIR & HYDRAULIC CYLINDERS • BOOSTERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS



A Textile Cosmetic

DURA BEAU is a finish that reveals hidden beauty in every fibre of almost every fabric—a time-tested formula that makes textiles spring to life with new-found enrichment and buy-appeal! It's the answer to the eternal clamor for glamour!

The DURA BEAU GIRL of 1953

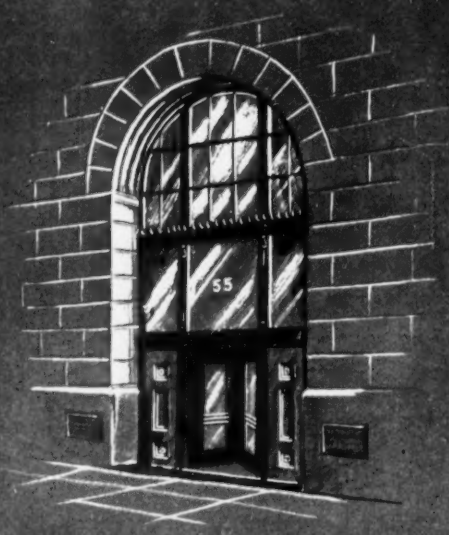
Dura Beau TEXTILE FINISHES

Reg. U.S.A. and CANADA

In the field of hosiery, for instance, DURA BEAU Finishes have been used—for decades—on more stockings than all other finishes combined! Write, wire or phone for one of our practical fieldmen.

SCHOLLER BROS., INC. • Manufacturers of Soaps, Softeners, Sulfonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa.

IN CANADA: SCHOLLER BROS., LTD., ST. CATHARINES, ONTARIO



TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

"forget about desizing"

—just use soap and water!

NU-FILM, a new non-congealing warp size, washes out of the fabric with soap and water. Nothing else. And positively no enzymes! Quick, thorough rinsability. Less costly. Faster.

Eliminates shadiness, splotches and redyes due to incomplete size removal. Operate boil-off units at high speeds—some fabrics can be boiled off and dyed in the same operation. NU-FILM acts as a soil suspending agent and dye leveler.

NU-FILM produces a smooth, tough film on spun rayon blends and cottons. Replaces gelatin as a size for filament viscose yarns. Greatly reduces hard size and set marks. Virtually eliminates rayon seconds. Turns out grey fabrics with a tight closed-in appearance; smooth, supple hand—*as a trial will prove!*

NU-FILM enables you to maintain a low, comfortable humidity in your weave room and still insure high weaving efficiency even on your most difficult styles.

National Starch Products, 270 Madison Avenue, New York 16, N. Y.

National
STARCH PRODUCTS

Please Send Us!

- ☐ Nu-Film Technical data
- ☐ Nu-Film laboratory sample
- ☐ Nu-Film _____ lbs. for trial run
- ☐ National representative to arrange for a Nu-Film trial

Name _____ Title _____

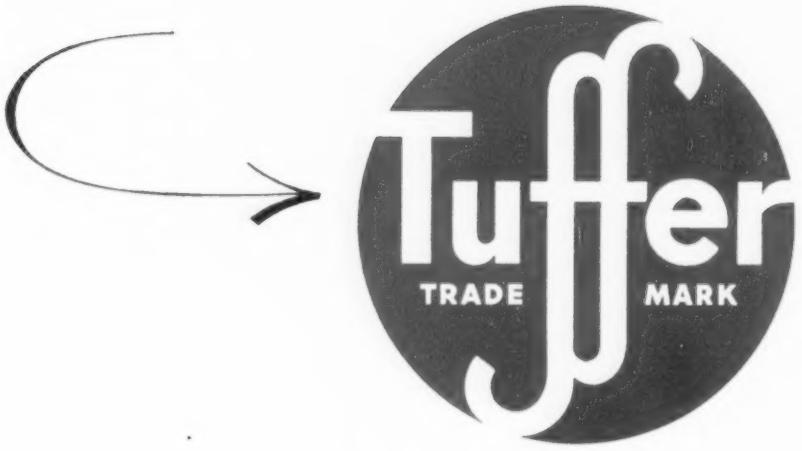
Company _____

Address _____

City _____ Zone _____ State _____

a modern trade-mark

for a modern product



CARD CLOTHING

Change is inevitable. It has been said many times that we either go forward or slide backward — we never stand still.

If you could compare the TUFFER Card Clothing of today (recognized by hundreds of mills throughout the country as the finest obtainable) with that available when we began 87 years ago you would realize the really great strides TUFFER has made in product development and in manufacture. To symbolize this progress we have adopted a new, modern trade-mark.

This new trade-mark will signify the craftsmanship behind our products and our pride in offering them to you.

TUFFER PRODUCTS

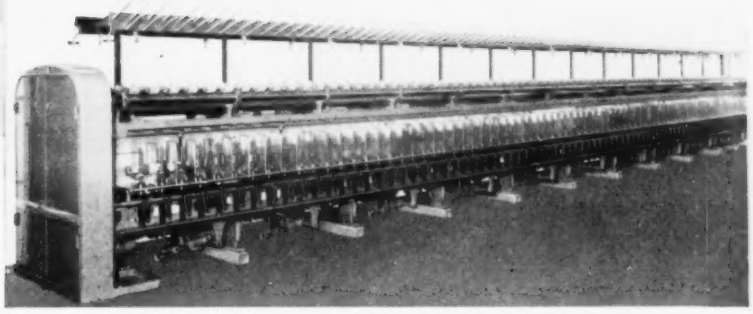
Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

A-2

HOWARD BROS.

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.
Branch: Philadelphia, Pa. *Direct Representation in Canada*



The Whitin "C6" Twister . . . Fafnir Ball Bearing equipped, on gear mountings, tension pulleys, spindles, and lifting rod rollers.

PARTNERS in PROGRESS

The Whitin "C6" Twister, one of the latest and most advanced machines in the Whitin line, reflects a greatly accelerated development program in textile machinery manufacturing. Designed for use by producers and processors of viscose rayon, acetate and other synthetic yarns, the "C6" offers many unusual features including the wide application of anti-friction bearings. In the head end, a combination of metal and laminated bakelite gears mounted on studs running on anti-friction bearings provides exceptionally quiet operation at extremely high speeds. This is an achievement of Whitin Designers and Fafnir Ball Bearing Specialists working side by side.

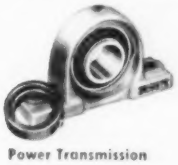
For over 30 years, Fafnir has been a Whitin supplier . . . providing ball bearings for original equipment and replacement. Good bearings aren't the sole answer to this relationship. Equally important is the Fafnir "attitude and aptitude" . . . a way of looking at bearing problems from the designer's viewpoint, an aptitude for supplying the precise bearings to fit the need. Maybe this combination can help you. The Fafnir Bearing Company, New Britain, Conn.

Whitin (30 YEARS) ...FAFNIR

Fafnir Ball Bearing "Economy" Packages

Sealed & Shielded Radial Type Bearings

. . . with various arrangements of seals and shields.



Power Transmission Units

. . . featuring the Fafnir Wide Inner Ring Bearing with Self-Locking Collar

Special Textile Units

for practically every textile machinery application.

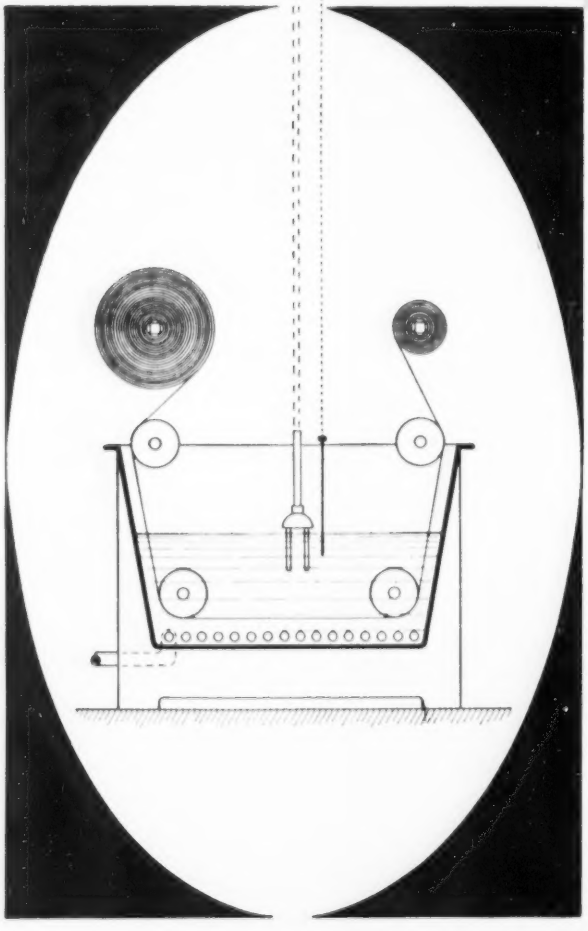
FAFNIR BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

Portable Foxboro Dynalog Redox Recorder, with recording temperature pen, as applied to jig dyeing.

REVOLUTIONARY ADVANCE IN CONTROLLED DYEING

- Increases color yield and uniformity
- Saves expensive reducing agents
- Speeds up production
- Eliminates titration and indicator papers



Here's a simple, inexpensive instrument that may completely solve costly problems in your batch or continuous dyeing processes—whether for cloth, yarn, or raw stock. The Foxboro Dynalog Redox Recorder determines the ability of the chemical bath to reduce the dyestuff for maximum color yield.

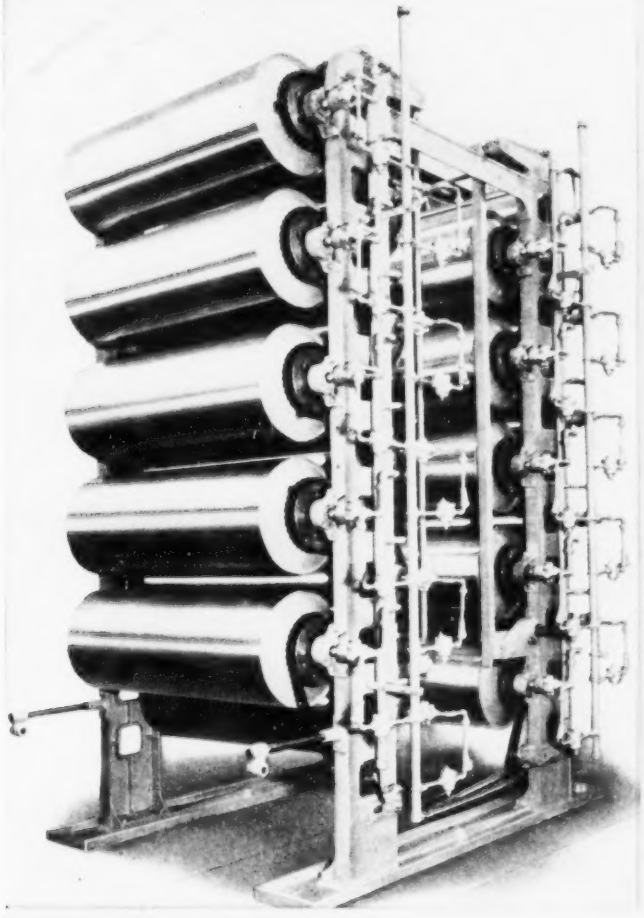
This is how it works. Almost every dye has a definite millivolt potential at which reduction is most efficient. By constantly recording the potential of the dye bath in millivolts, the Redox Recorder shows any variation from this optimum value . . . enables the dyer to make immediate accurate corrections by adjusting chemical concentration and temperature.

Now in use in more than 40 mills, this unique instrument has been endorsed by dyestuff manufacturers for vat and sulphur colors, for indigo dyeing, and for Orlon dyeing by the cuprous method. Get all the facts. Write, wire, or phone The Foxboro Company, 483 Neponset Ave., Foxboro, Mass., U.S.A.

FOXBORO
REG. U.S. PAT. OFF.

OXIDATION-REDUCTION POTENTIAL MEASUREMENT

Factories in the United States, Canada, and England



Built up to Performance ...down to a price

It's here! An engineered Cylinder Dryer at a competitive price. Made by Butterworth, famous for fine drying equipment for 133 years.

You'll get more drying capacity for your money because your installation is engineered to do *your* drying job. Butterworth engineers take into consideration weight of cloth, degree of moisture content, and dryness desired. Cylinders may be arranged vertically or horizontally depending on space limitations in your mill.

Choice of copper or stainless steel cylinders . . . fabricated or cast iron columns . . . gear or sprocket and chain drive.

Butterworth Cylinder Dryers are made in our new plant at Bethayres, where new precision machinery, including automatic welding equipment for both coded and uncoded cylinders, assures maximum fabricating economies.

Before you do anything about increased drying capacity, put it up to Butterworth.

H. W. BUTTERWORTH & SONS CO.
Bethayres, Pennsylvania

1211 Johnston Bldg., Charlotte, North Carolina
187 Westminster St., Providence, Rhode Island

Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing and Embossing
Pot Spinning Machines for Synthetic Fibers
Calender Rolls : : Tenter Chains

BUTTERWORTH

Is compact design your problem?

here's how portable electric tool manufacturers solve it with **NEEDLE BEARINGS**

Torrington Needle Bearings are designed into many portable electric tools because their small cross section permits the close shaft-center distances so necessary to compactness.

They have been *performance-proved* through years of successful operation on counter shafts, pinion shafts and spindles in drills, buffers, sanders, grinders and other electric tools.

Since it was introduced nearly twenty years ago, many manufacturers throughout industry have made the Torrington Needle Bearing "standard equipment" for products requiring an anti-friction bearing that's light, compact and has high rated radial capacity.

Why not find out how Torrington Needle Bearings can be used to advantage in your products?

THE TORRINGTON COMPANY, Torrington, Conn., South Bend 21, Ind.

TORRINGTON NEEDLE BEARINGS

Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

Trade-marks of some of the portable tool companies whose products enjoy the benefits of Needle Bearings.

SKIL PORTABLE TOOLS · STANLEY · MILLERS FALLS TOOLS SINCE 1868 · SIOUX · PET POWER TOOLS · Speedmatic · Thors · Milwaukee · Black & Decker · Mall

How to put the finger on HIDDEN MAINTENANCE COSTS!

. . . ask a Gulf Sales Engineer to check your lubrication practice

What percentage of your machinery maintenance costs can be charged to faulty lubrication? How many replacement parts? How many man-hours? How much down time?

Gulf Sales and Staff Engineers are particularly interested in those hidden maintenance costs which can be substantially reduced by improved lubrication practice.

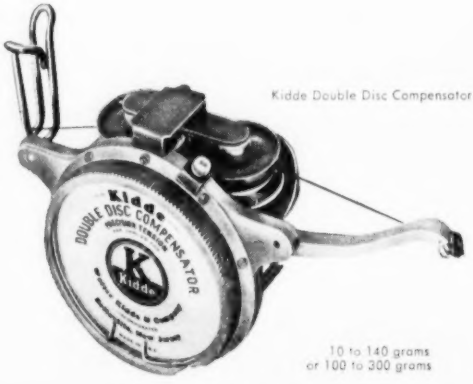
A Gulf Sales Engineer can put his finger on hidden maintenance costs in your mill just as he has in other progressive textile mills. Write, wire, or phone your nearest Gulf office and ask a Gulf Sales Engineer to call.

GULF INDUSTRIAL LUBRICATION

Gulf Oil Corporation • Gulf Refining Company
PITTSBURGH 30, PA.

how ABBOTT WINDERS are tension controlled at TEXTRON

Textron has about a thousand *Kidde* Double Disc Compensators on their Abbott Winders. Why? Because *Kidde* Double Disc Compensators: 1) Assure uniform tension throughout the quill 2) Control tension at bunch 3) Prevent sloughing off due to soft quills 4) Relieve yarn tension at *start* of bunch, thereby promoting longer quill and washer life 5) Prevent deformed and crushed quills when winding nylon. If you use Abbott Winders on any kind of synthetic yarn (rayon, nylon, Orlon, Dacron (Polyester Fiber) Dynel, etc.) *Kidde* Double Disc Compensators will improve the handling. Write today for full information.



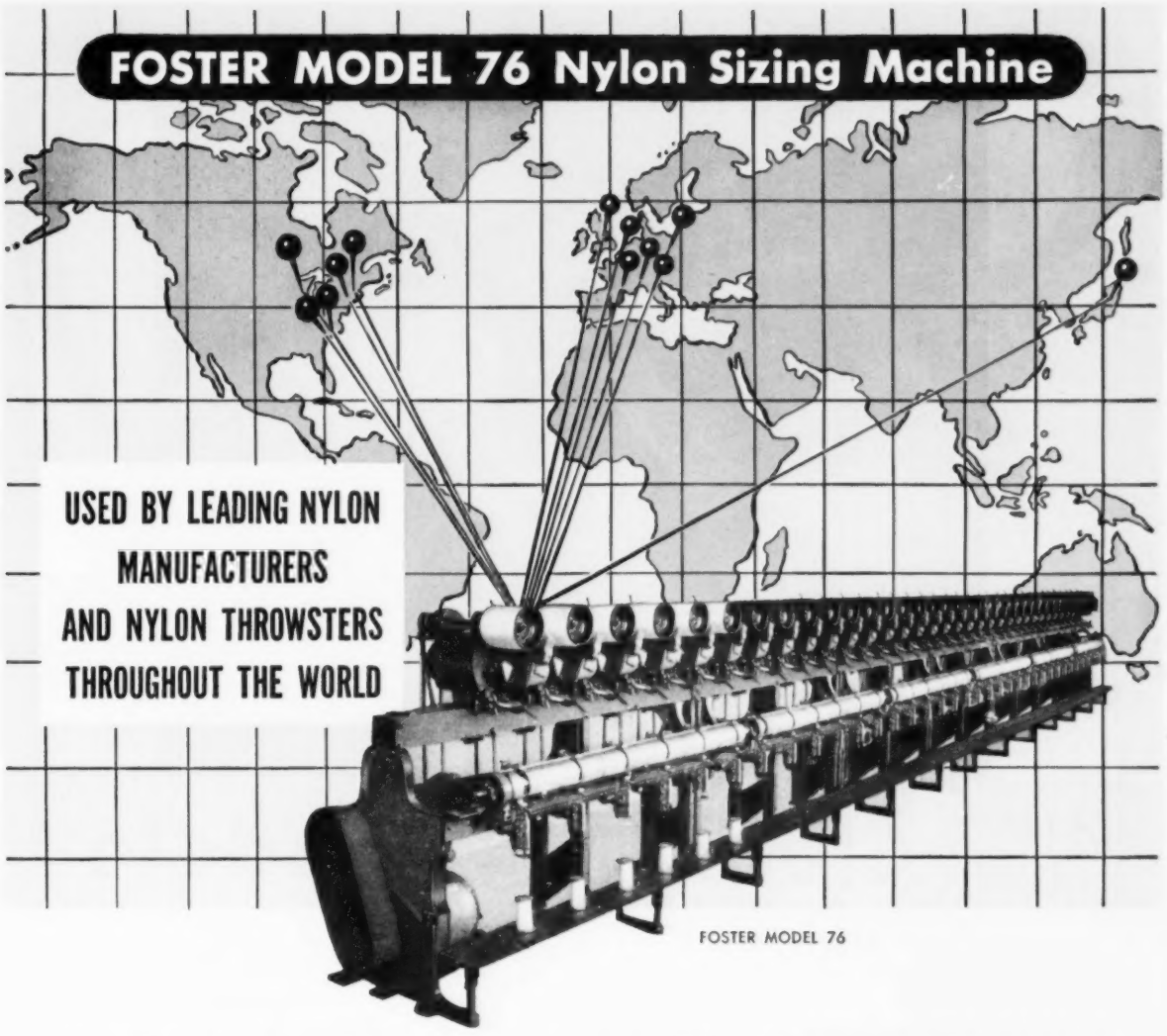
Kidde Double Disc Compensator

10 to 140 grams
or 100 to 300 grams

Kidde

Walter Kidde & Company, Inc.
1090 Main Street, Belleville 9, N. J.

FOSTER MODEL 76 Nylon Sizing Machine



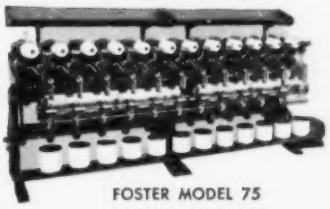
USED BY LEADING NYLON MANUFACTURERS AND NYLON THROWSTERS THROUGHOUT THE WORLD

FOSTER MODEL 76

The following manufacturers of nylon have large installations of Foster Model 76 Nylon Sizing Machines and also, in many cases, complimentary installations of Foster Model 75 nylon cone winding machines.

1. Algemene Kunstzijde, Unie N. V., Arnhem, Holland
2. Société Rhodiaceta, Lyons, France
3. Societa Rhodiaceta Italiana, Milan, Italy
4. Société de la Viscose Suisse, Emmenbrucke, Switzerland
5. Deutsche Rhodiaceta, A. G. Freiburg, Germany
6. E. I. du Pont de Nemours & Co., Seaford, Delaware
7. In addition we have shipped Model 76 machines and Model 75 machines to numerous nylon throwing plants in Japan, U.S.A., England and other countries.

Bulletin No. A-97 on request.



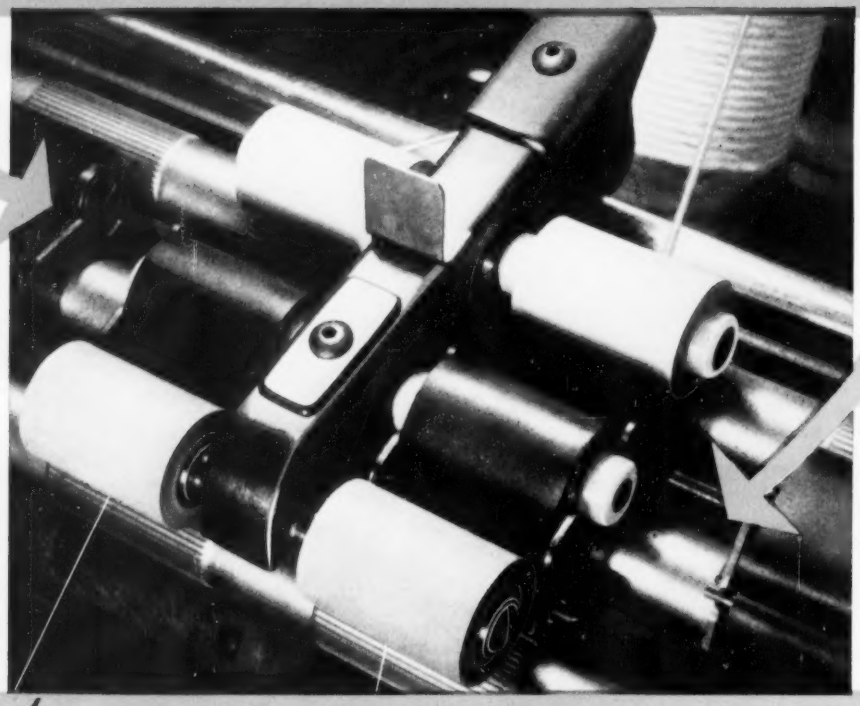
FOSTER MODEL 75
CONING MACHINE

FOSTER MACHINE COMPANY

Westfield, Massachusetts, U.S.A.

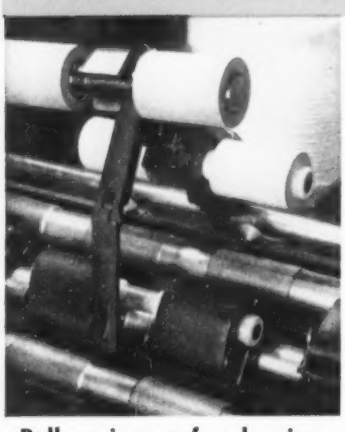
Southern office, Johnston Bldg., Charlotte, N. C.; Canadian Representative, Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que.; European Representative, Muschamp Taylor Ltd., Ashton-Under-Lyne, England.

That's Right—NO CAP BARS!



Brand New **CleanAlign Saddle**

PATENTS PENDING



Rolls swing up for cleaning

eliminates ⅔ of the area to be cleaned, because there are NO cap bars

CLEANALIGN maintains rolls in perfect parallel alignment at all times. Illustrated in use with CLEANDRAFT Non-lubricating Top Rolls in back and middle lines and CLIMAX Ball-bearing Top Rolls on front line—

CLEANALIGN Saddle forms a completely non-lubricated arrangement: eliminating oiling expense; giving oil-free yarn; reducing picking cost by 75% to 90%.

The CLEANALIGN Saddle permits wide variety of weight distribution, easily changed.

Piecing-up from side possible.

The CLEANALIGN Saddle is applicable to practically any cotton spinning system.

FOR FURTHER INFORMATION ADDRESS

PRODUCT SALES, INC. 21 VERNON STREET WHITMAN, MASS.

Ala., Ga., La., Miss. & Tenn.	*South Carolina*	*Va. & N. C.*	*Ark., Tex., Okla.*	*For European Service:*
J. H. Canady 3344 LeBron Ave. Montgomery, Ala.	Dudley Dunlap Product Sales, Inc., P. O. Box 1863 Room 502 Montgomery Bldg. Spartanburg, S. C.	Raymond L. McCauley Product Sales, Inc. 412 Wilder Bldg. Charlotte, N. C.	Texas Roller Covering Works 1407 North 17th St. Waco, Texas	Victor Beecroft 54 Boroughgate Otley, Yorkshire, England

FOREIGN REPRESENTATIVES IN THE PRINCIPAL TEXTILE CENTERS OF THE WORLD

YEARS OF SUCCESSFUL SERVICE IN THE TEXTILE INDUSTRY HAVE PROVED THESE DU PONT FINISHES

"DULUX" HIGH-HIDING MAINTENANCE WHITE ENAMEL

. . . is a very intense *high-hiding* white for mill and office interiors. It flows out smoothly and 1 coat generally covers previously painted surfaces . . . resists yellowing for years! It adheres strongly to properly prepared wood, metal, concrete, brick, fiberboard or plaster.

PENETRATING WOOD FINISH

. . . allows a complete 2-coat job, plus waxing, on floors and woodwork in *just one day*. Penetrating deeply and more evenly than ordinary finishes, it seals pores against moisture and grime . . . often used as a prime coat under "Dulux" Interior Clear Varnish for floors that get extra hard wear.

"DULUX" MACHINERY FINISH

. . . resists the softening action of lubricating or cutting oils . . . has excellent impact resistance. Solid colors flow out without pull or drag . . . dry quickly and hold up well either on indoor or outdoor installations. It is specially prepared for metal surfaces.

"DULUX" SAFETY COLOR CODE FINISHES

. . . special high-visibility colors to *spotlight* safety hazards and locate safety equipment. Chemically formulated for wood, metal, masonry, wallboard; exterior or interior. Comes in High Visibility Yellow, Alert Orange, Safety Green, Fire Protection Red, Precaution Blue, and standard colors.

DU PONT
REG. U.S. PAT. OFF.

150th Anniversary

PAINTS

CHEMICALLY ENGINEERED TO DO THE JOB BETTER

Better Things for Better Living . . . *through Chemistry*

SEND FOR FREE BOOK

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Division, Dept. TI-210, Wilmington 98, Delaware

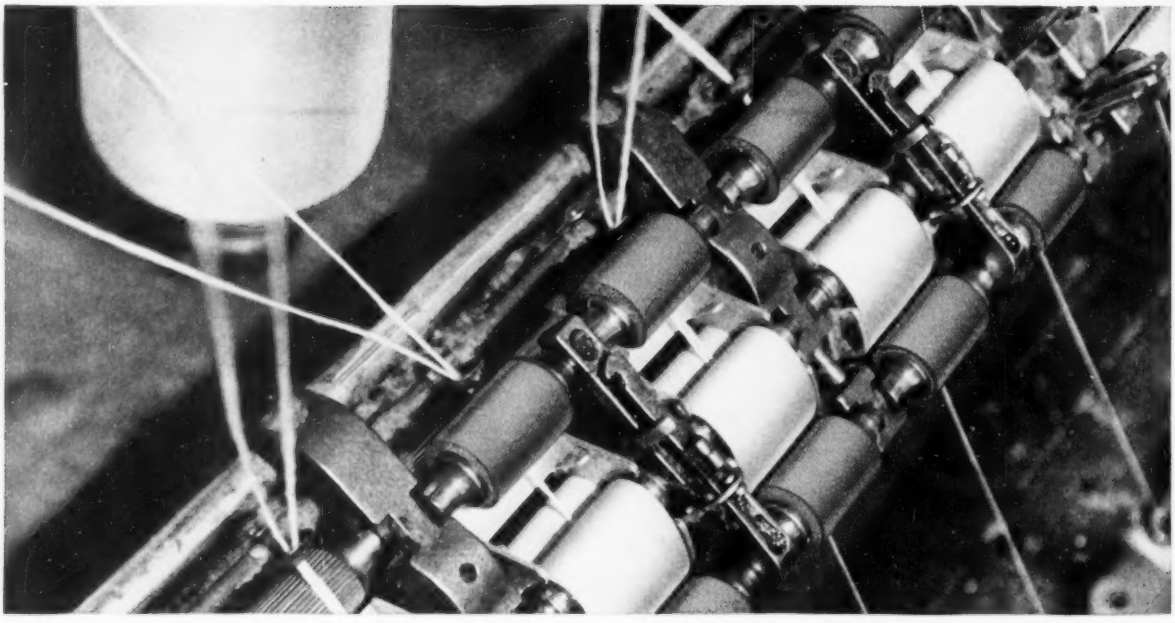
Please send me at no cost, the new 24-page book about DULUX Maintenance Finishes.

NAME _____
TITLE _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____

For further information use Handy Return Card, Page 200

Draft better yarn at lower

two famous



New Dayco Cot Containing Ibrocol Successfully Combats Eyebrowing

You can now reduce labor and cot costs in your spinning room and at the same time increase yarn quality. The new Dayco Cot, EW-465, makes this possible. Besides successfully combating eyebrowing, this new cot drafts better quality yarn, requires fewer cleanings of the clearer boards, and runs longer between buffings than any other cot.

This remarkable performance is the result of adding Ibrocol to the composition of the new cot. Its chemical and mechanical action gives the cot a surface that maintains just the right coefficient of friction to remove only the short staple fibers and transfer them well back under the clearer board. Long staple fibers that could build up into eyebrows are left in the yarn. Hence there is less waste as well as less eyebrowing.

And that's not all. The addition of Ibrocol retards slicking and glazing in the new Dayco Cot. Thus the surface retains its coefficient of friction longer, requiring fewer buffings. This means big savings in time and labor.

Dayco Cots contribute in many other ways too toward more efficient drafting. Get the complete story from your Dayco Representative.

Dayco Cots Do This For You—

- **Successfully combat eyebrowing**
- **Fewer lap-ups and ends-down**
- **Fewer buffings; longer between buffings**
- **Don't groove, pit, or develop flat spots**
- **Unaffected by moisture or temperature changes**
- **Fewer cleanings of the clearer boards**
- **Draft better quality yarn**
- **Lower overall cot costs**

cost with these

DAYCO PRODUCTS

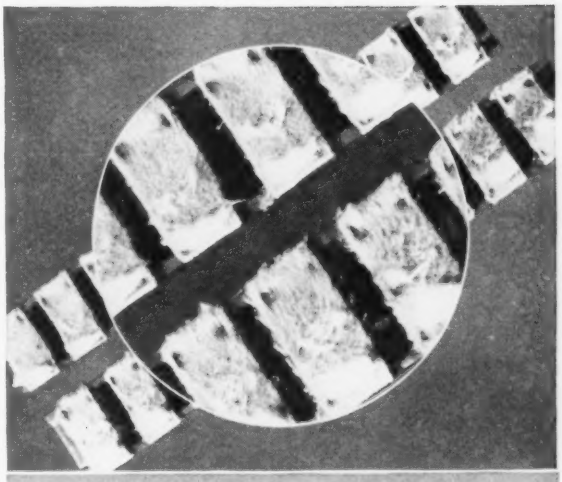
Uniformity of Dayco Long Draft Aprons Saves Time and Money; Ups Yarn Quality

Dayco Long Draft Aprons are manufactured under strict supervision to close tolerances. As a result, their drafting ability remains constant, enabling most mills to get up to 10% more uniform yarn.

They're built for round-the-clock day-in and day-out performance. A neutral axis of special Fortified Cord gives them great strength with just the right amount of stiffness to prevent compressing, wrinkling or distorting. Yet they are completely flexible for long life without cracking or breaking.

You'll find you can start off fast with Dayco Aprons, even after a week-end shutdown. Since Daycos don't stretch or take a permanent set, they start drafting the instant you start the frame.

Whether you use the single apron or two apron system, you'll find that Dayco equipped frames will save you time and money besides producing better quality yarn. See your Dayco Representative soon for the complete story.



Note the difference in waste on the two clearer boards. Top board was used with the new Dayco EW-465 Cot which removes only short staple fibers, packing them well back away from possible pickup by the end.

Whether you use the single apron or two apron system, Daycos can do the job expertly. They have just the right surface for carrying the roving without damage to the front line of cots.

Why It Pays to Equip With Dayco Long Draft Aprons

- Get more uniform yarn
- Fast, positive morning starts
- No moisture or temperature troubles
- Not damaged by hard ends
- Won't crack, curl, or pick up lint
- Drafting ability stays constant
- Lower costs

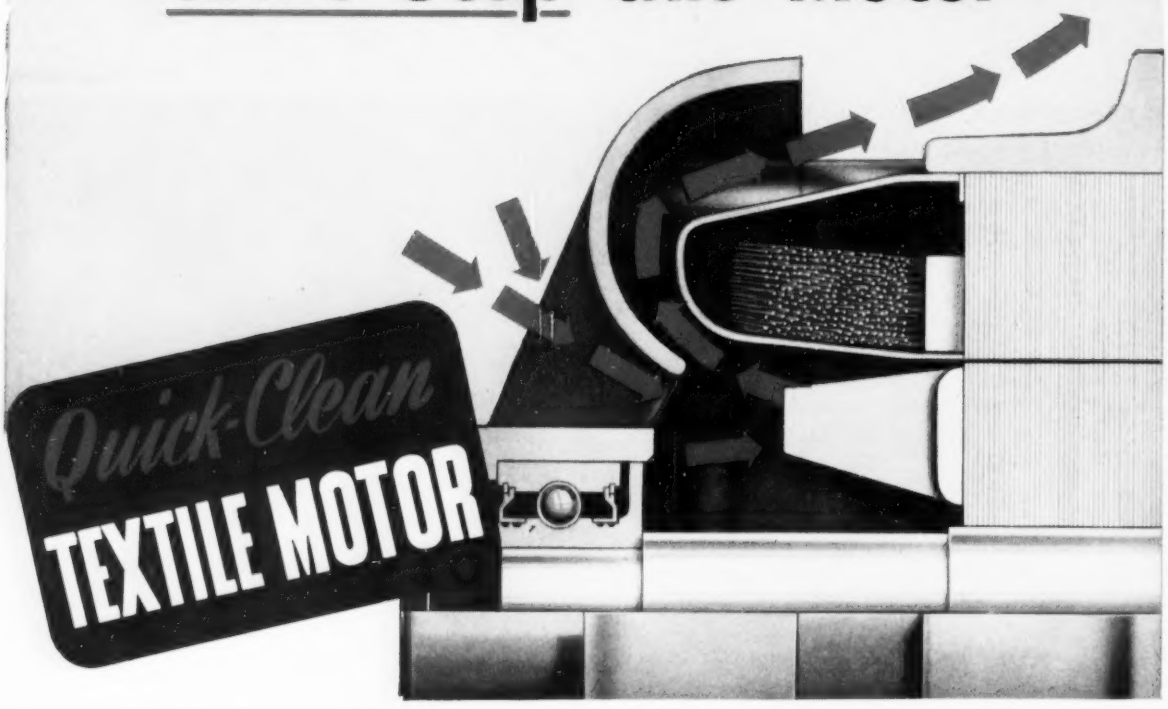
Dayton Rubber

Since 1905 ©D. R. 1953

Textile Products for Better Spinning and Weaving

Dayton Rubber Company, Textile Division, Woodside Bldg., Greenville, S. C.

Here's Why Dirt and Lint Can't Stop this Motor



Wide Open Design Allows Powerful Fans To Sweep Lint And Dirt Right Out Of Quick-Clean Motor!

YOU HAVE NO MOTOR PROBLEM from lint-laden atmospheres when you use *Quick-Clean* textile motors. *Quick-Clean* motors have wide open passages for cooling air and powerful fans to sweep lint and dirt right out of the motor. Inside surfaces are smooth and hard so lint cannot lodge anywhere. Air passages are shaped for smooth air flow.

Quick-Clean motors also save you money with sealed bearings which eliminate usual expensive bearing maintenance procedures. Grease or oil cannot leak from the bearings to soil materials or gather lint and dirt. Lint and dirt cannot enter the bearing. Ask your nearest Allis-Chalmers Sales Office about the *Quick-Clean* textile motor. Or write for Bulletin 51B6055. Allis-Chalmers, Milwaukee 1, Wis.

A-3970

Quick-Clean, Texrope and Vari-Pitch are Allis-Chalmers trademarks.

Sold . . .
Applied . . .
Serviced . . .

by Allis-Chalmers Authorized Dealers, Certified Service Shops and Sales Offices throughout the country.

CONTROL — Manual, magnetic and combination starters; push button stations and components for complete control systems.

TEXROPE V-belts in all sizes and sections, standard and *Vari-Pitch* sheaves, speed changers.

PUMPS — Integral motor and coupled types from ¾ in. to 72 in. discharge and up.

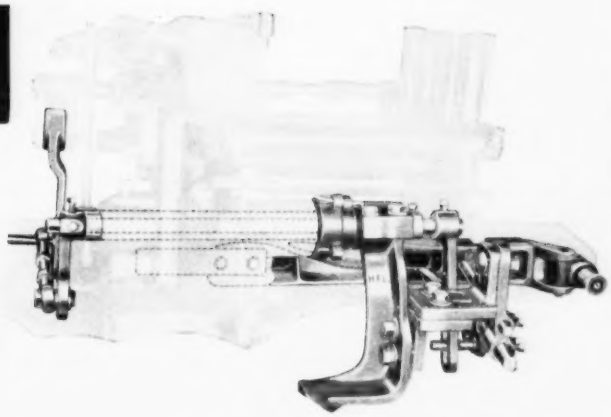
ALLIS-CHALMERS

used with Magazine on W-2 and W-3
WOOLEN and WORSTED LOOMS

it's new . . . and it's keeping

LIVERMORE

in the LIMELIGHT:



ELIMINATE "DRAG-INS"
with this
SHUTTLE-EYE, POSITIVE ACTION
HFL IMPROVED THREAD CUTTER

it CUTS . . . at the shuttle eye

leaving a short tail. A number of these HFL Improved THREAD CUTTERS have been on *3-shift operation for more than 18 weeks* (up to time of publication of this advertisement) with NO DRAG-INS from outgoing bobbins!

it HOLDS . . . balance of filling

and draws it over the binder rest until it is cut by the temple. The filling then drops below the lay, eliminating drag-ins that normally originate from this source.

Not only is this Thread Cutter exclusive with LIVERMORE, but it comes complete with a unique, aluminum **SLOTTED FLOATING BINDER** which cannot tip, thus keeping the face of the binder in line with the shuttle for better control.

Send for descriptive literature.

HFL
IMPROVED LOOM PARTS

H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

patent applied for

the package is a

Picture Frame

for your product

GOOD PACKAGING isn't just a seasonal matter —a modern colorful package is a point-of-sale aid the year 'round.

Your package should reflect and frame the quality of your product. Let Apaco designers collaborate on your new packaging ideas —perhaps multiple packaging will increase unit sales. A phone call or a note on your letterhead will bring our representative A-FLYING.

APACO
ESTABLISHED 1868

ATLANTA PAPER COMPANY

Atlanta 2, Georgia

Manufacturers of Corrugated Shipping Cases • Display Folding Cartons • Textile Packaging

DeCetex

the superdurable *Silicone* water repellent for synthetic fabrics

Withstands repeated dry cleaning and laundering. DeCetex is a most durable water repellent finish for synthetic fabrics and blends. Fabrics properly treated with DeCetex retain a spray rating of 100 after 10 or more dry cleanings; 80 to 100 after 3 two-hour launderings.

Resists water-borne stains; improves fabric quality. DeCetex imparts a desirable hand and excellent resistance to water-borne stains. DeCetex treated fabrics seldom show mark-off as a result of the finish. They have superior resistance to wear; improved sewability; increased tear strength; greater stability and crease resistance.

Easily applied with standard finishing equipment. DeCetex is easily applied from a water emulsion and cured at normal resin curing temperatures. No corrosive chemicals are involved; no washing or neutralizing is required and treated fabrics remain odorless even after aging.

For more information on the many advantages offered by DeCetex or for technical assistance, call our nearest branch offices or write for data sheet BL-3A.

DOW CORNING SILICONES

DOW CORNING CORPORATION

Atlanta
Chicago
Cleveland
Dallas
Los Angeles
MIDLAND, MICHIGAN
New York
Washington, D. C.

In Canada: Fiberglas Canada Ltd., Toronto

Great Britain: Midland Silicones Ltd., London

FOAM'S A THIEF...

KILL IT

with Dow Corning ANTIFOAM A

The most versatile and efficient of defoamers, Dow Corning Antifoam A is effective at concentrations in the range of:

- 1 ppm in distilling vegetable oils
- 0.1 ppm in crystallizing sodium bromide
- 3 ppm in textile sizing solutions
- 3 ppm in cooking syrups
- 10 ppm in Geon latex
- 4.5 ppm in yeast fermentation

Dow Corning Antifoam A is odorless, tasteless and physiologically harmless. And it is most economical to use because it is effective in such amazingly low concentrations. Dow Corning Antifoam A can be used as received, dispersed in a solvent or mixed with one of the foaming ingredients.

Dow Corning Antifoam A Emulsion is widely used in the industrial processing of aqueous foamers. Dow Corning Antifoam AF Emulsion is equally effective in aqueous systems and designed for use in the food processing industries.

see for yourself!

mail coupon TODAY for **free sample**

DOW CORNING SILICONES

Dow Corning Corporation
Midland, Mich., Dept. BL-3.

Please send me data and a free sample of—

- ☐ Dow Corning Antifoam A or
- ☐ Dow Corning Antifoam A Emulsion or
- ☐ Dow Corning Antifoam AF Emulsion

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

HERE ARE 5 GOOD REASONS WHY YOU SHOULD SELECT

SACO-LOWELL

ROVING & SPINNING

FOR PRODUCTION OF YOUR QUALITY YARNS

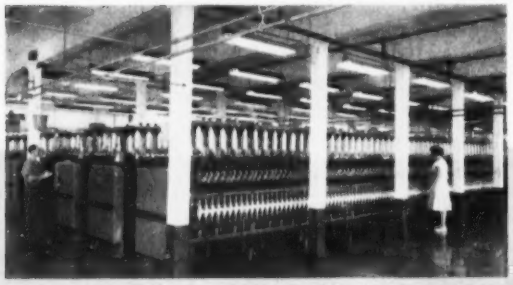
(1) The drafting elements are not modifications of any cotton system, but have been designed specially for wool and synthetics. The fiber control required to assure smooth and even drafting is equally effective on long and short wools, synthetics and blends of these fibers with wool.

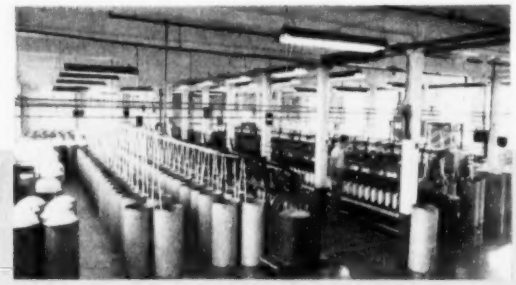
(2) This system is new in concept, original in design, rugged in construction.

(3) With roll spreads ranging from 3.375" to 9.00" it is possible to process all commercial grades of wool and synthetics without time consuming and expensive equipment changes. Modern sub assemblies, including New Era Spindles, Lubricated Rings, "Umbrella Creels," and S-L-T Self Aligning Antifriction Top Rolls all contribute to trouble-free, economical operation.

(5) Large roll diameters, with effective weighting systems, assure freedom from defects which develop from fiber slippage, undrafted grists and "lap-ups" and chokes.

(4) Adjustments required when changing from one stock to another are readily made in a short time.





SACO-LOWELL Installation at Lebanon Knitting Mills, Inc., Pawtucket, R. I.

There's an illustrated folder with complete information about Saco-Lowell Roving and Spinning available without obligation. Write for your copy today.

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD *and* SACO, MAINE, *and* SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

Reduce Yarn Handling Time 30%

TAPERED HEADLESS PACKAGE TAKE-UP of the new Unirail Uptwister cuts operator's yarn-handling time as much as 30%. Time-saving features include: automatic tailing device . . . hinged arbor which speeds up donning and doffing, without handling the yarn . . . self-threading guide . . . quick-threading centering eye . . . anti-drum-wrap device . . . unique stop-motion. Bulletin 501 tells you the whole story.

...with the new

Headless Package Unirail® Uptwister

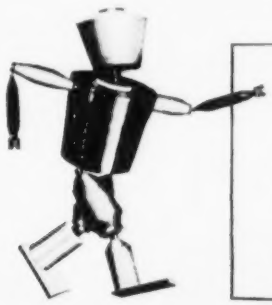
Never before could you produce such good yarn at such low costs.

Here's why. With this new Headless Package Unirail Uptwister, you minimize yarn handling time . . . twist with less tension . . . cut donning and doffing time as much as 30% . . . doff without touching the yarn . . . avoid roll and shaft wraps . . . eliminate extra threading . . . run at high speeds — (thanks to the revolutionary new Uniflex Spindle) . . . cut power costs . . . get rid of free oil and yarn spoilage . . . reduce oiling and cleaning cycles to new all-time lows.

What's more, pre-erection, factory run-in and sectional shipment of the Headless Package Unirail Uptwister simplify installation . . . get your new uptwister on the job quickly with perfect assurance of top performance from the start.

Can any uptwister be that good? — Read the new fact-packed Bulletin 501 and see for yourself. Or better yet, see your nearest Universal Winding Company sales representative for full details.

NEW BULLETIN 501 shows you in detail how the new Unirail Uptwister cuts your costs, speeds up production and improves yarn quality. Write today.



23.2.3

UNIVERSAL WINDING COMPANY

P. O. Box 1605, Providence 1, R. I.

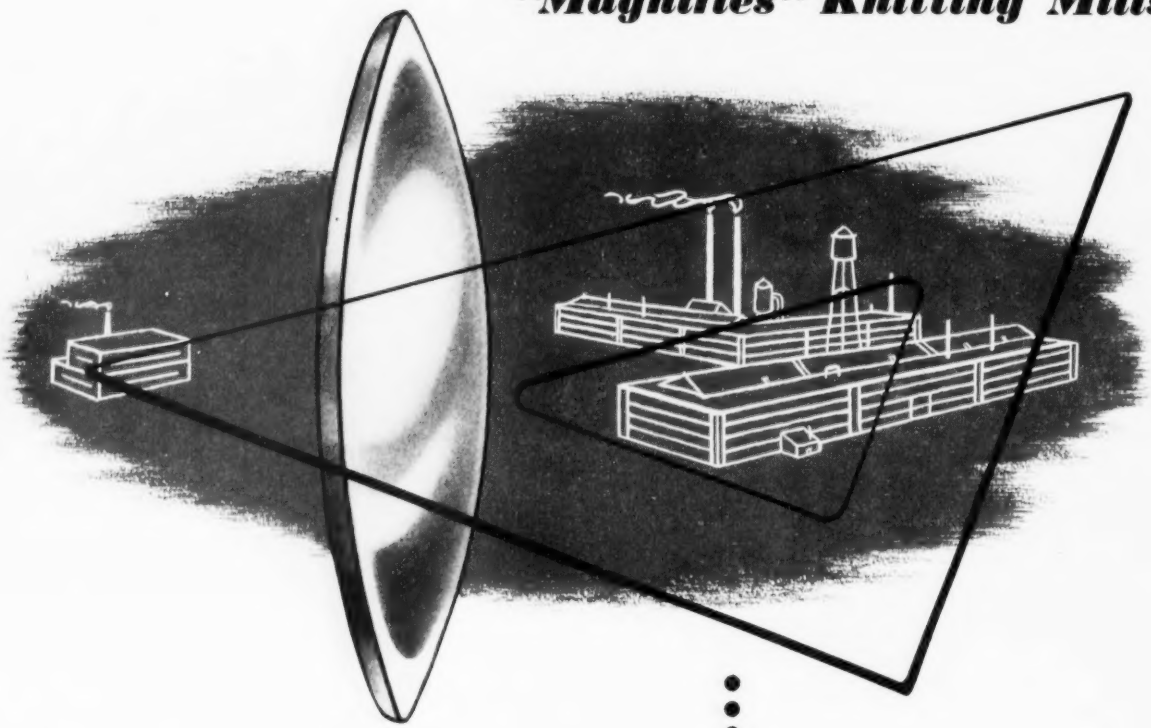
Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

HOW SUPREME ENGINEERING

"Magnifies" Knitting Mills



Without adding one inch of actual floor space, Supreme's engineering makes knitting mills bigger in output capacity . . . bigger in production versatility . . . bigger in profit-knitting power.

How? Supreme does this by creating knitting machines that *multiply* a mill's *knitting-ability*.

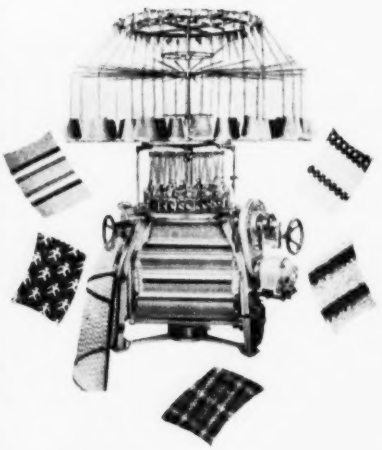
Look into the modern Supreme line. In model after model you'll find multi-machine fabric versatility and production rates that "magnify" a knitting mill in its customers eyes.

You'll also see the basic construction features that assure long-lived, low-maintenance operation. These standardized features give all **Supreme's** a family resemblance that simplifies life for your knitter-mechanics.

Write, wire or phone today for complete information on any of the Supreme's shown on this page.

For more information on how the SUPREME LINE can "magnify" your knitting production, be sure to visit Supreme at Booths #219—236 during the KNITTING ARTS EXHIBITION, ATLANTIC CITY, April 27th through May 1st.

SUPREME
KNITTING MACHINE CO., INC.
107 JOHNSON AVE., BROOKLYN 6, N. Y.
Southern Representative and Showroom:
The Malluck Co., 711 S. Tryon St., Charlotte, N. C.



For example—Here's Model LT/SAAF "A ONE-MACHINE KNITTING MILL"— This automatic variable striper and pattern placer machine knits a tremendous variety of Terry and Jersey fabrics at terrific production rates. Switches easily from one to the other.

SK-162

PRE-EMINENT FASTNESS

THIS IS YOUR HALLMARK OF QUALITY–
A GUARANTEE OF CONTROL WHICH WILL IDENTIFY
ALL INDANTHRENE SHIPPING CONTAINERS

gdc

GENERAL DYESTUFF CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

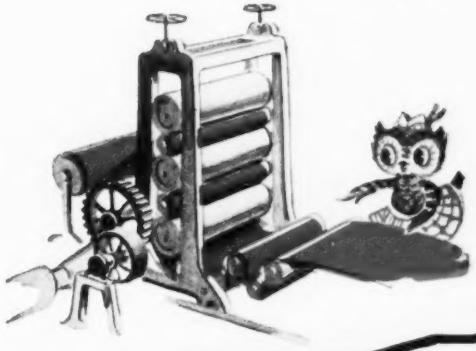
BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

All these

AT NEW LOW COST...

Stabilization

Crush Resistance



Glazing and Embossing—

with RHONITE R-2

To give you the greater economy and improved efficiency of RHONITE R-2 we have not sacrificed these other familiar RHONITE advantages—(1) storage stability; (2) easy handling; (3) excellent durability.

P. S. *It's a good finish for nylons, too.*

RHONITE *is a trademark Reg. U.S. Pat. Off. and in principal foreign countries.*

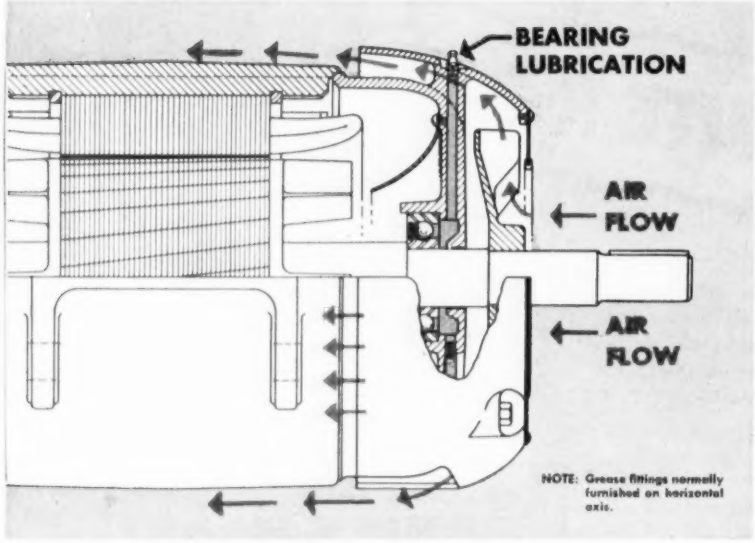
CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

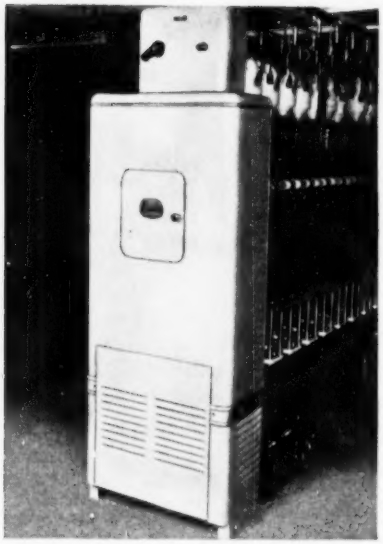
WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

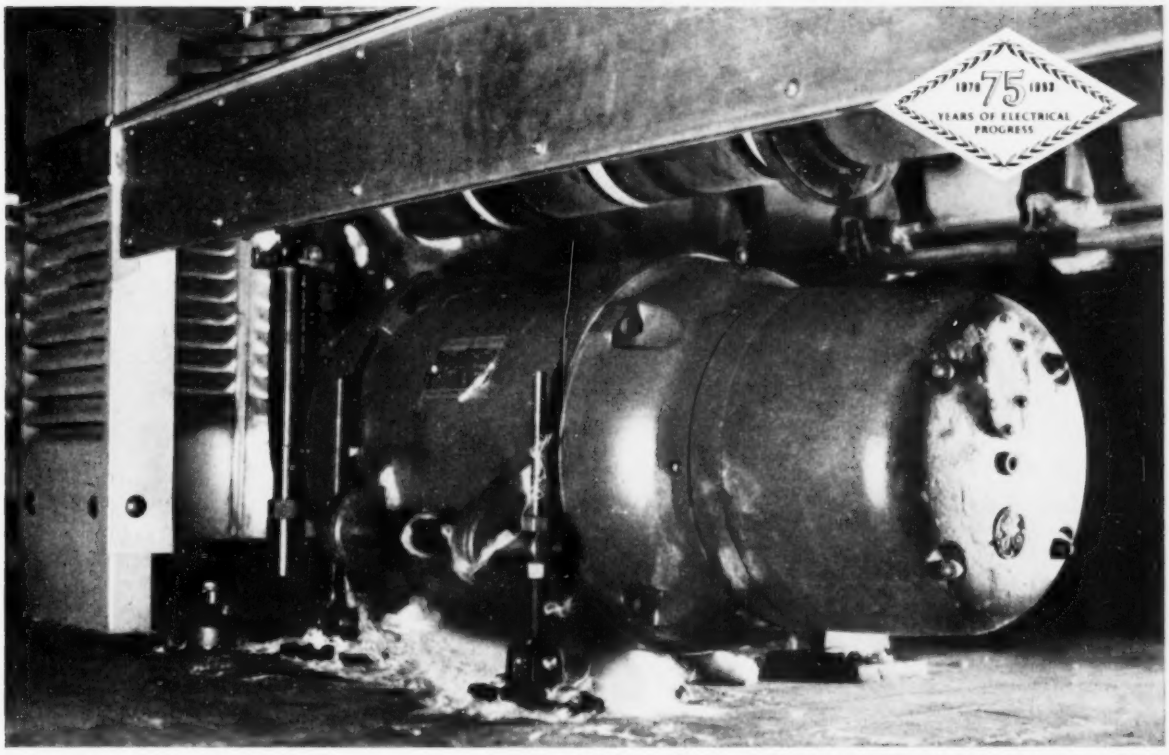
SG-1 Gwaltney spinning frames



MAINTENANCE TIME IS REDUCED because positive lint-expulsion keeps motor clean, large grease reservoirs and convenient pressure-relief fittings make lubrication infrequent and easy—without disassembly.



STREAMLINED MOTOR CONTROL is compact, conveniently-located, designed especially for the SG-1 frame.



AISLE SPACE IS SAVED because compact, totally-enclosed, fan-cooled G-E motor is mounted beneath the SG-1 spinning frame. Non-clogging design of external cooling fan and fan housing allows free passage of lint-laden air.

driven by new-type G-E motors

Two motor designs—fan- or water-cooled—meet all mill needs

WATER-COOLED DESIGN uses large-diameter Saran tubing wound directly around coil ends—assures maximum cooling efficiency.

Saco-Lowell's new SG-1 Gwaltney spinning frame—the latest in modern textile machinery—required equally new motor designs.

First, Saco-Lowell engineers drew up complete drive requirements. Then they worked with the General Electric design and application engineers who developed the two new types of SG-1 spinning frame motors: one, totally-enclosed, fan-cooled, non-clogging; the other, totally-enclosed and water-cooled.

BOTH MOTORS ARE COMPACT, EFFICIENT, DEPENDABLE

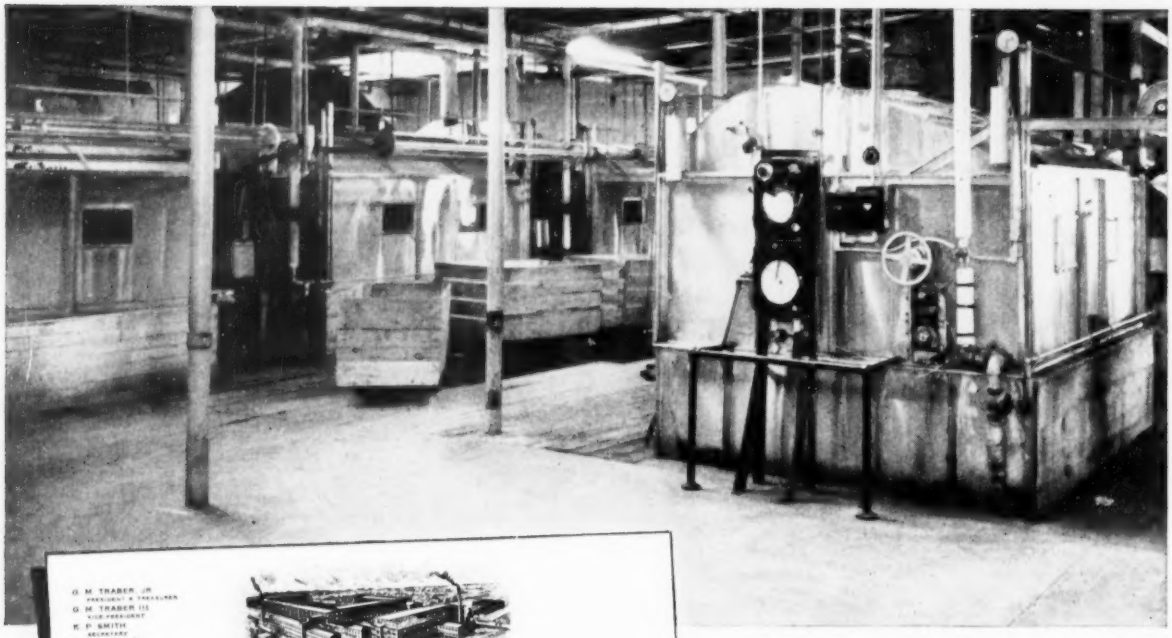
1. They minimize cleaning problems. Both motors are protected against entry of lint.
2. They save aisle space. Both are compactly designed to fit under the spinning frame.
3. They promote even spinning room temperatures.
4. They take varying spinning loads in stride.
5. They simplify maintenance. Grease fittings are conveniently located on sides of motor. Relubrication is easy and infrequent.

Your G-E apparatus sales representative can give you further details. General Electric Co., Schenectady, New York 654-28

Engineered Electrical Systems for Textile Mills

GENERAL ELECTRIC

"We wouldn't want to dye without the control these instruments give"



G. M. TRABER, JR.
PRESIDENT & TREASURER
G. M. TRABER III
VICE-PRESIDENT
K. P. SMITH
SECRETARY
W. S. TRABER
ASST. TREASURER

THE PERRY KNITTING COMPANY
INCORPORATED
MANUFACTURERS OF
KNITWEAR
NITEY NITE SLEEPING GARMENTS
PERRY, N.Y.

January 6, 1953

Taylor Instrument Companies
90 Ames Street
Rochester, New York

Gentlemen:

Because we are satisfied with the results of the first two Taylor controls on our dye tubs we now have them on all of the tubs.

It is not a matter of guesswork now but a fact these controls have increased the consistent quality of the dyework and we would not want to dye without the control which these instruments give.

Quality control is a major factor in the continued success of "Nitey Nites" and we are happy to include Taylor Instruments among those that help to do the job.

Yours very truly,
THE PERRY KNITTING COMPANY
Karl W. Monson
Karl W. Monson
General Superintendent

KWM:kp

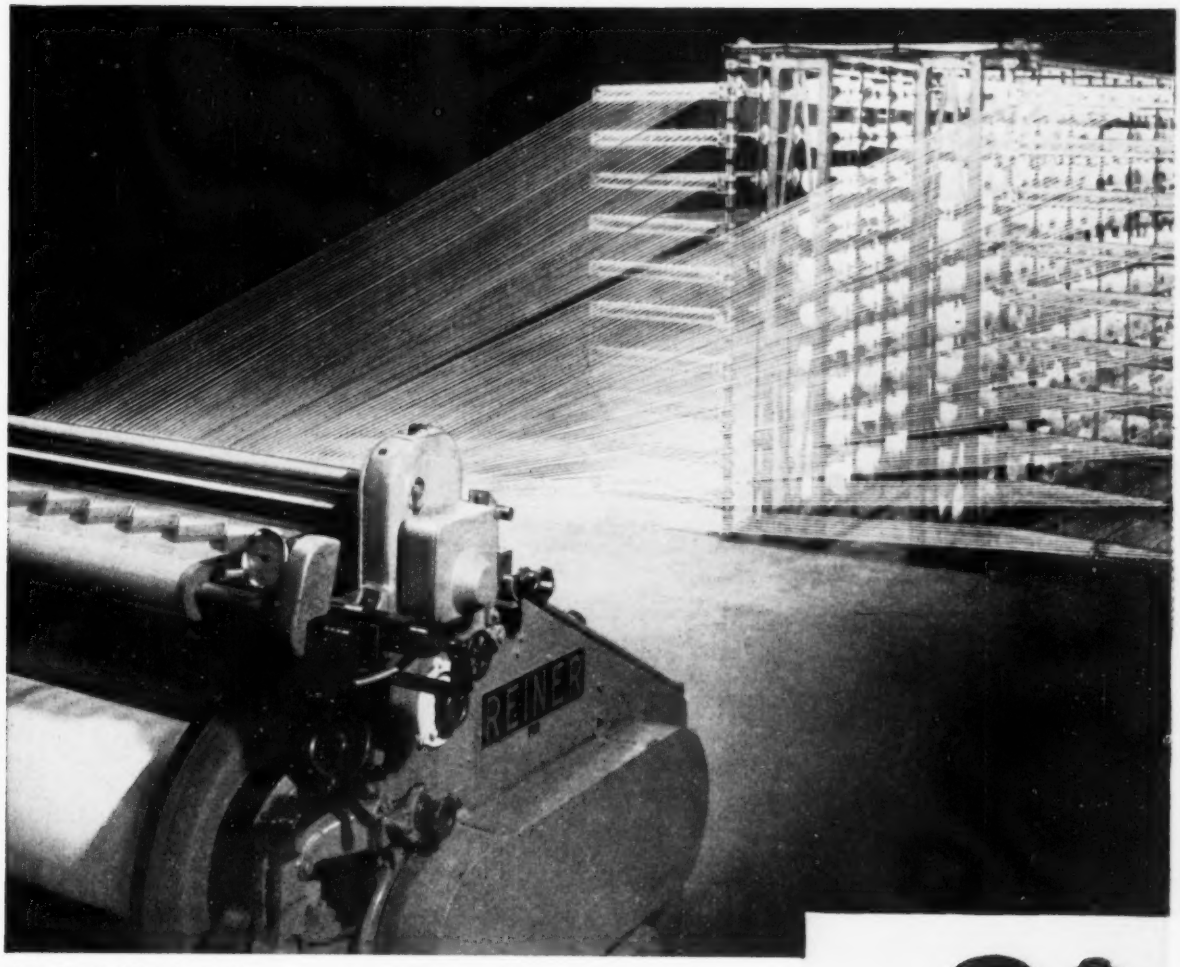
Says Mr. Karl W. Monson, General Superintendent of the Perry Knitting Company of Perry, N. Y., and we're very happy he feels that way about Taylor's contribution to the success of "Nitey Nite" Sleeping Garments. Mr. Monson is referring to Taylor's Control System for Dyeing which automatically controls the entire process from starting the steam supply until the end-of-cycle signal flashes.

The main advantages of this system are that it **assures uniform dyeing conditions, cuts operating costs, preserves quality of dyed fabric, eliminates costly errors of manual operation.**

Perry Knitting Company is typical of the many mills which started out with one or two Taylor Control Systems and have ended up with complete instrumentation on all units.

There are at least 25 different ways in which Taylor controls can help the textile industry cut costs and maintain quality. Why not call in your Taylor Field Engineer, or write Taylor Instrument Companies, Rochester, N. Y. and Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, flow, liquid level, speed, density, load and humidity.*

TAYLOR INSTRUMENTS MEAN ACCURACY FIRST



(Photo: Courtesy of Robert Reiner, Inc.)

Miles of Nylon filament with a problem in every inch . . . for SYNTHANE

You are looking at thousands of miles of the hair-fine filaments that go into nylon fabric.

Many equipment and processing problems must be worked out before these filaments emerge as blouses, curtains or couch covers. Synthane solves many of these problems. For example, to process nylon yarn, treatment with a corrosive size is necessary. Machine components made of Synthane laminated plastics stourly resist corrosion.

The "elastic memory" of nylon causes the fit that endears nylon hosiery to women, but it also crushes ordinary bobbins on which the yarn is wound. Synthane laminated plastic bobbins successfully resist crushing.

Nylon filaments are glamorous. They are also so fine they must be handled gently. Synthane laminated plastic parts can be machined to snag-free super smoothness.

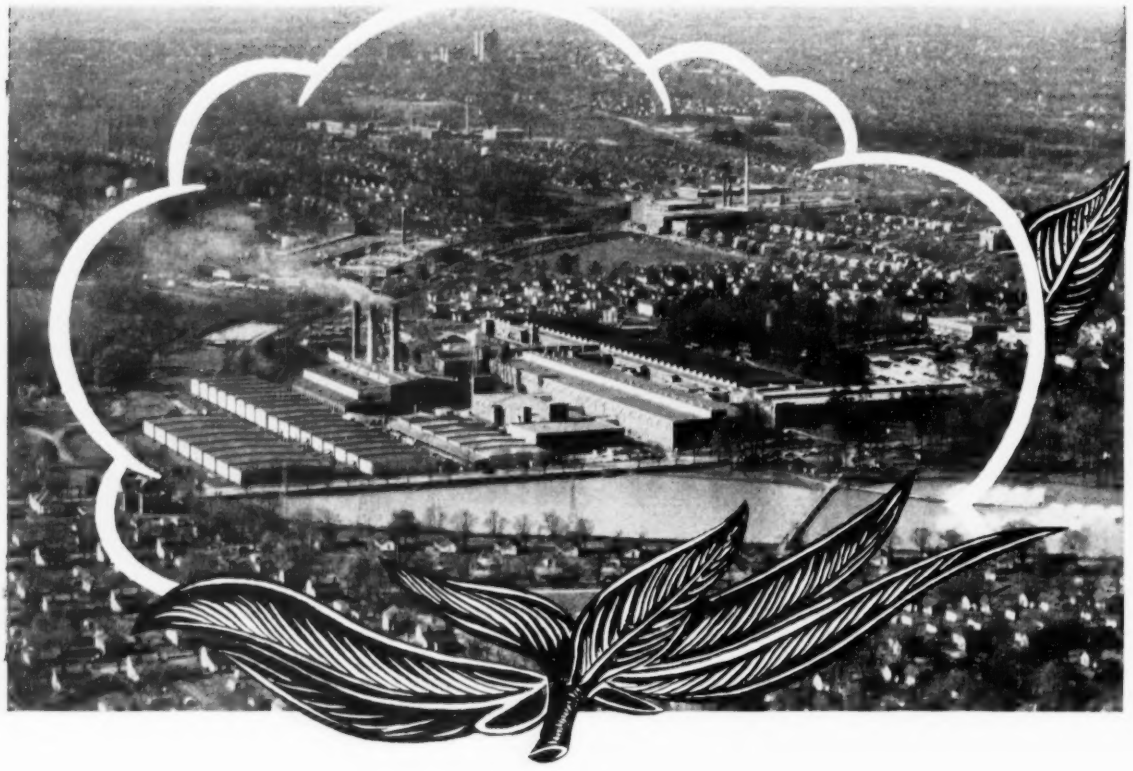
The properties that make Synthane laminated plastics essential to textile people may interest you. For information and ideas about how Synthane may be helpful to you, send for the Synthane Catalog. Synthane Corporation, 13 River Rd., Oaks, Pennsylvania.

Bobbins, pirns and redraw caps made from Synthane laminated plastics. Synthane is also used for hosiery examining forms, measuring rolls, piping, gears, verge plates and many other textile parts.

Synthane-one of industry's unseen essentials

SYNTHANE

LAMINATED PLASTICS



AN INDUSTRY GROWS IN GREENSBORO

The formation of the Cone Export and Commission Company in New York City in 1891 went unnoticed by the people of the thriving little village of Greensboro, North Carolina. There was no indication that this new organization which was established for the purpose of selling Southern-made cotton fabrics would become a valued corporate citizen of the Greensboro community. However, within a period of two years, Greensboro looked with pride upon the decision to move there from New York the main office of the Cone organization.

This turned out to be the foundation on which a vast textile enterprise was built. By 1896 the Proximity Manufacturing Company was producing the first Cone denim. A short time later cotton flannel was being woven on the looms of the Revolution Cotton Mills, and an increased demand for Cone denim resulted in the construction of White Oak Cotton Mills, the world's largest denim plant.

These manufacturing operations along with the Proximity Print Works Plant made of Greensboro the focal point of Cone interests in the early days. But it was not for long. Additional mills were constructed or acquired in other localities throughout North Carolina, South Carolina and Alabama. Today CONE MILLS CORPORATION includes 17 spinning and weaving plants housing 589,564 spindles and approximately 17,000 looms. In addition, there are three modernly equipped printing and finishing plants and one diaper plant. More than 16,500 people of the South have a part in processing the millions of yards of fabrics turned out annually by these 21 units.

Cone Mills Corporation is the country's largest manufacturer of denims and cotton flannels and is also an important producer of corduroys, drills, twills, suedes, towels, wash cloths, jeans, print cloths, plisses, diapers, sateens and coverts.

CONE MILLS CORPORATION

GREENSBORO • NORTH CAROLINA

PROXIMITY PLANT, Greensboro, N. C. • WHITE OAK PLANT, Greensboro, N. C. • REVOLUTION DIVISION, Greensboro, N. C.
TABARDREY PLANT, Haw River, N. C. • EDNA PLANT, Reidsville, N. C. • RANDLEMAN PLANT, Randleman, N. C. • PINEVILLE PLANT, Pineville, N. C.
ASHEVILLE PLANT, Asheville, N. C. • DWIGHT DIVISION, Alabama City, Ala. • ENO PLANT, Hillsboro, N. C. • MINNEOLA PLANT, Gibsonville, N. C.
CLIFFSIDE PLANT, Cliffside, N. C. • HAYNES PLANT, Avondale, N. C. • SALISBURY PLANT, Salisbury, N. C. • UNION BLEACHERY, Greenville, S. C.
REVOLUTION RAYON PLANT, Greensboro, N. C. • GUILFORD PRODUCTS COMPANY, Greensboro, N. C. • PRINT WORKS PLANT, Greensboro, N. C.
GRANITE PLANT, Haw River, N. C. • FLORENCE PLANT, Forest City, N. C. • AMERICAN SPINNING PLANT, Greenville, S. C.

Selling Organization: CONE MILLS, INC., 59 WORTH ST., NEW YORK CITY

today, more than ever, you need **PRECISION**

today, more than ever, you need **ALTHOUSE**

Bring your toughest dyeing problems to Althouse

. . . we'll *help you* to solve them. Benefit from the practical SERVICE

rendered by our technically-trained representatives and our trouble-shooting "experts" in the research and experimental laboratories here at our model plant. Their advice and cooperation are yours for the asking!

ALTHOUSE
Chemical Company, Inc.
READING, PENNSYLVANIA

Pace-setter in precision dye-making

Good Roving—Good Yarn

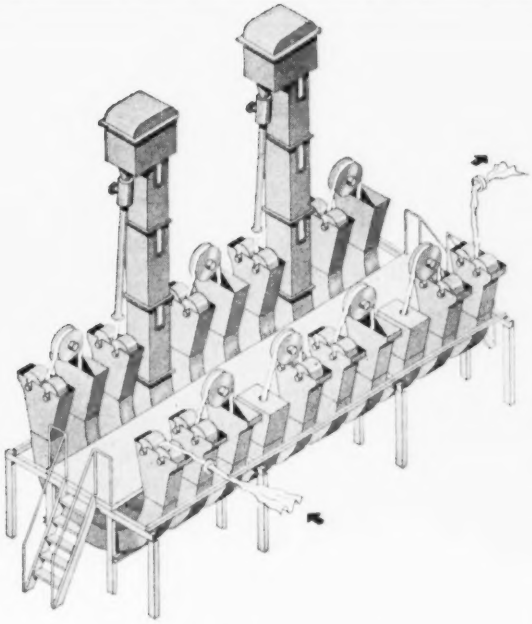
GOOD ROVING is essential to good yarn, and the lubrication prescription that promotes a smooth, efficient and dependable operation of roving frames can mean the difference between profit and loss. The fundamental process of roving has been altered very slightly over the years. But in many cases, plain bearings of top and bottom draft rolls, cone shafts, counter weight sheaves, and main shafts have been replaced with anti-friction bearings to decrease maintenance and power costs and improve production. As a result, special problems of lubrication have come into the fore. Special types of lubricants have been developed by Standard Oil to solve these problems and assure the continued efficient operation for which anti-friction bearings were designed. Standard Oil's "know-how" is based on 64 years of service to Southern textile mills. Why not avail yourself of this vast store of experience by calling in a Standard Oil representative today?

Standard Oil Company
(KENTUCKY)

STANDARD OIL
LUBRICANTS

NOW..."BIG MILL" EFFICIENCY FOR MILLS OF SMALLER CAPACITY

DU PONT TYPE 1000 CONTINUOUS PEROXIDE BLEACHING SYSTEM



SPECIFICATIONS:

CAPACITY
.....750 to 1500 lbs. hr.

SPEED
.....to 100 yards minute
(Handles goods in the 3-7 yds. lb. class)

OVER-ALL DIMENSIONS
..... Length 33 ft.; Width 14 ft.; Height 24 ft.

New unit lowers costs . . . increases uniformity . . . improves quality

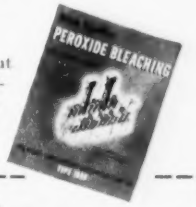
With the Du Pont Type 1000 system, all the advantages of full-scale continuous bleaching ranges are made available to smaller finishing plants. This compact two-stage system has a capacity of 750 to 1500 lbs. per hour . . . produces finished goods of high uniformity and quality. Automatic operation permits close control of chemicals and steam—frequently resulting in savings up to 40%.

Like all Du Pont Continuous Bleaching Systems, the Type 1000 is simple in design and construction . . . can be installed and operated at surprisingly low cost. Even at top speed—100 yds. min.—operation is easily supervised by one man. Such economies, together with the increased production made possible, usually pay for the unit within two years.

Small mills find the Type 1000 system ideal for full production requirements. Large mills use it as an auxiliary unit for specialty bleaching. Whatever the size of your mill, it will pay you to investigate this new continuous bleaching system and the many advantages it offers. E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Delaware.

NOTE: The equipment illustrated, which can be used in the Type 1000 System, is designed and sold by H. W. Butterworth & Sons Co., Bethayres, Pa. Other manufacturers also supply equipment for this system.

FREE BOOKLET
gives you complete information about the Type 1000 system . . . describes advantages, applications, steps of operation and equipment design. Send in the coupon below for your copy.



E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Delaware

Please send me your new free booklet which completely describes the new Du Pont Type 1000 Bleaching System.

*Name*_____ *Position*_____

*Firm*_____

*Street & No.*_____

*City*_____ *State*_____

DU PONT PEROXIDES
FOR TEXTILE BLEACHING

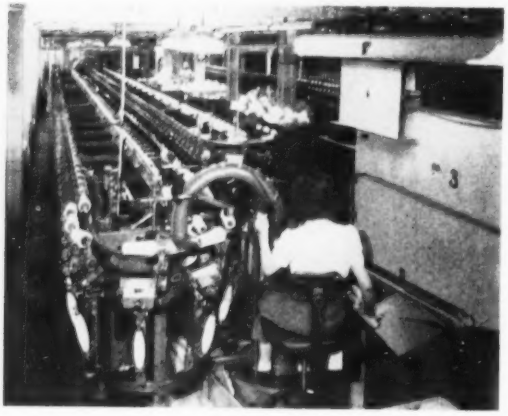
Available in drums and tank cars { **"Albone" 35 . . . Hydrogen Peroxide, 35%** / **"Albone" 50 . . . Hydrogen Peroxide, 50%**

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Complete Automatic Winding Systems for Rewound Filling

to take advantage of large package spinning, more yarn on filling bobbins, more uniform bunches, better weaving bobbins, and inspected yarn, all of which go to make a better fabric.



Abbott Traveling Spindle Package Winders

Automatic Cone or Tube Winders for warping, dyeing, twisting, quilling, sales.

Can be equipped with any one of a variety of slub catchers and inspection devices.

Production up to 1000 bobbins per hour per operator.

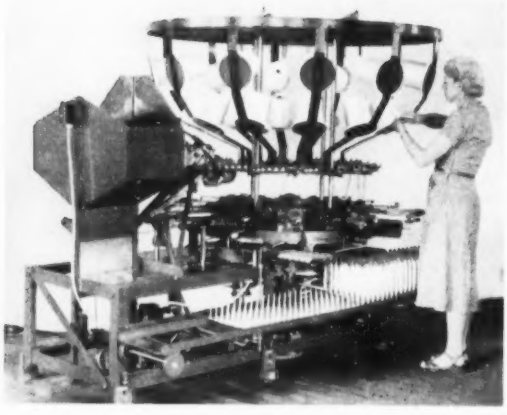
Abbott Traveling Spindle Automatic Quillers

For winding cotton, spun rayon, worsted, etc., equipped to doff automatically into baskets, or stack automatically into boxes.

For rewinding woolen yarn from mule and ring frames.

For winding filament rayon and nylon, etc., with automatic pinboard attachment or wide belt inspection conveyor.

Production up to 2000 bobbins per hour per operator.



Abbott Fully Automatic Radial Quiller

This new quiller has been developed to bring complete automatic quilling to highly diversified mills and the small mills.

For winding cotton, spun rayon, filament rayon, worsted, wool, etc.

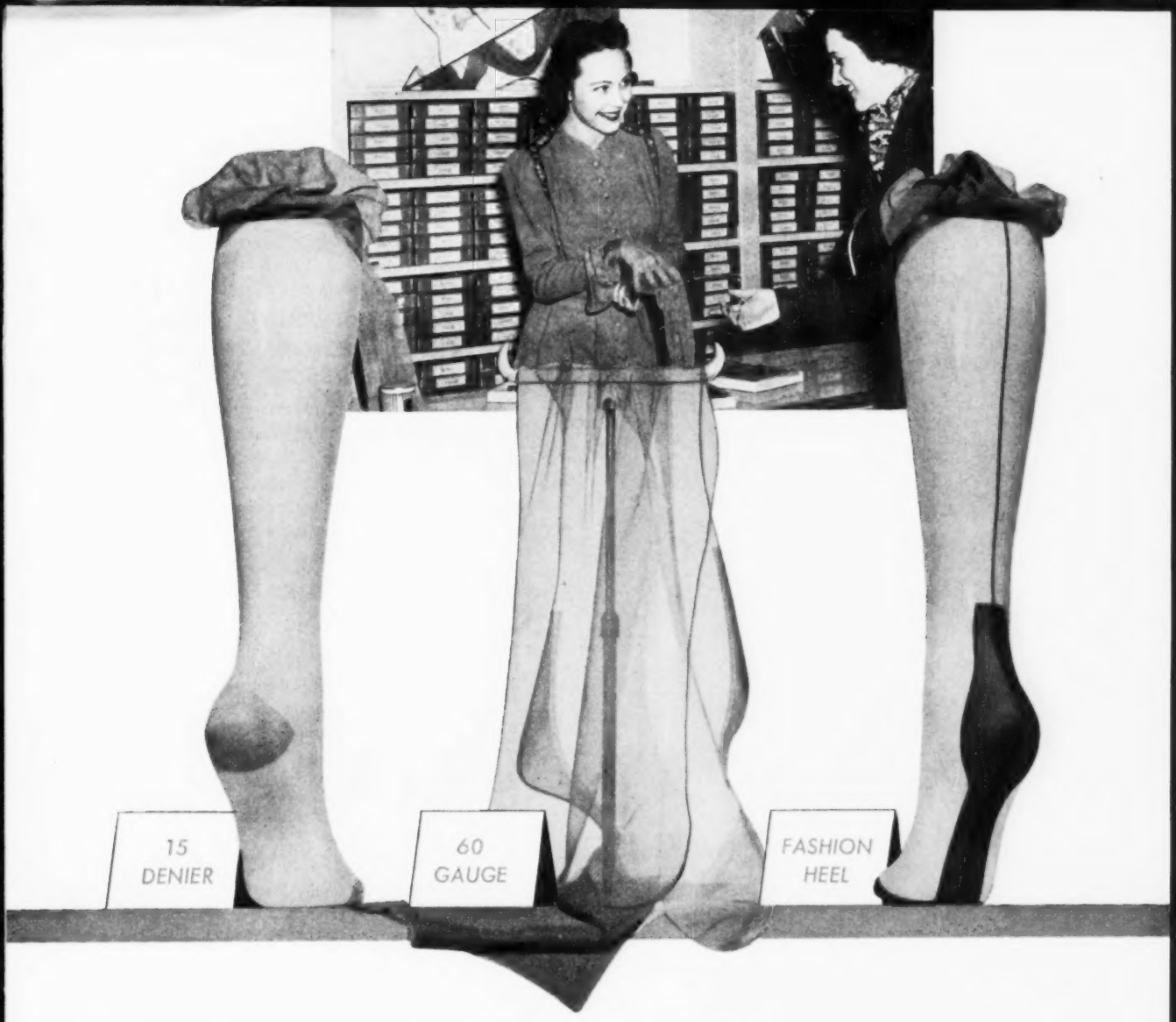
Can be arranged to deliver bobbins to Pinboard Attachment, or into baskets, or onto wide belt conveyor.

Production up to 2000 bobbins per hour per operator.

ABBOTT MACHINE CO., INC.

WILTON, NEW HAMPSHIRE

SOUTHERN SALES AND SERVICE: GREENVILLE, S. C.



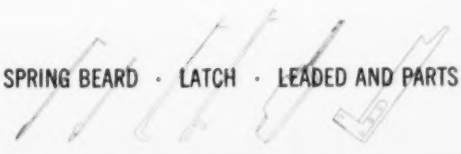
TORRINGTON'S COMPLETE NEEDLE SERVICE...

meets all requirements for fine hosiery knitting

Whatever the gauge, denier or style of hosiery, there is a Torrington Needle exactly suited to the job for efficient production of top quality merchandise. Call on Torrington for every needle requirement.

THE TORRINGTON COMPANY
Torrington, Conn., U.S.A.
Established 1866

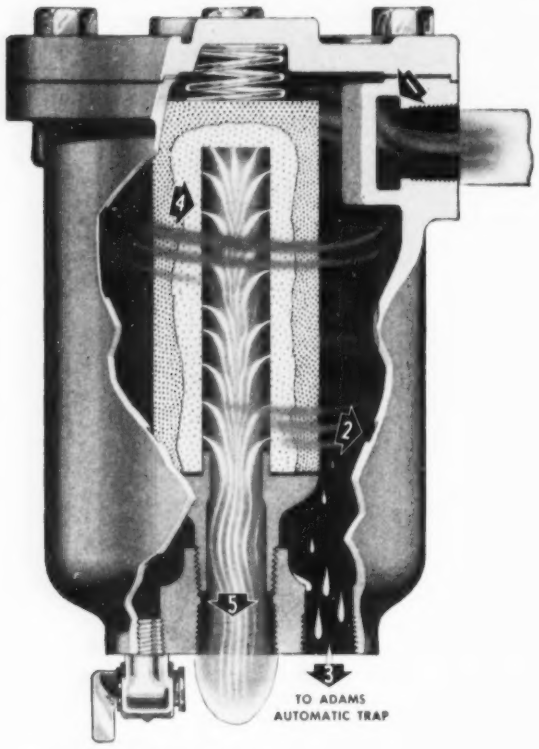
SPRING BEARD · LATCH · LEADED AND PARTS



TORRINGTON NEEDLES

Branches: New York · Philadelphia · Chicago · Boston · Greensboro, N. C. • St. Louis • Bedford, P. Q.—Toronto, Canada • *Pacific Coast Representative:* E. G. Paules, 1762 W. Vernon Ave., Los Angeles 37, Calif. • Broadgate House, 7-10 Eldon St., London E. C. 2, England

ADAMS *has both* *



—— BOTH ANSWERS TO THE PROBLEM OF KEEPING WATER, WATER VAPOR, OIL AND DIRT OUT OF COMPRESSED AIR LINES

There's no *one* answer to this problem! The most expensive aftercooler you can buy will not remove scale that is picked up in the distribution lines. The most expensive air filter you can buy cannot guarantee removal of water vapor until it has been condensed by cooling. That's why Adams makes both.

* PORO-STONE *AIR FILTER*

1. Centrifugal separation of dirt and liquids.
2. Drainage to trap directed by vertical cast-in slots.
3. Continuous, fully automatic trap action.
4. Rapid diffusion and filtration through permanent, cleanable Poro-Stone.
5. Clean, dry air at practically unchanged pressure. Standard, stocked sizes handle from 10 to 700 cfm.

Easily installed in either vertical or horizontal pipe line.

* *AFTERCOOLER AND CYCLONE SEPARATOR*

Cools air to within a few degrees of cooling water, making certain that compressed air is colder than surrounding atmosphere, so that no further condensation can take place.

Counter flow, air-through-tube design assures continuously high heat transfer rate.

Double cyclonic action deposits all water and entrained oil in moisture chamber.

R. P. ADAMS CO., INC.
216 E. Park Drive, Buffalo 17, New York

Please send me your latest literature, Bulletin No. 176 on BOTH the Poro-Stone air filter and the Adams Aftercooler — Cyclone Separator.

Name .....

Company ..... *Title* .....

Address .....

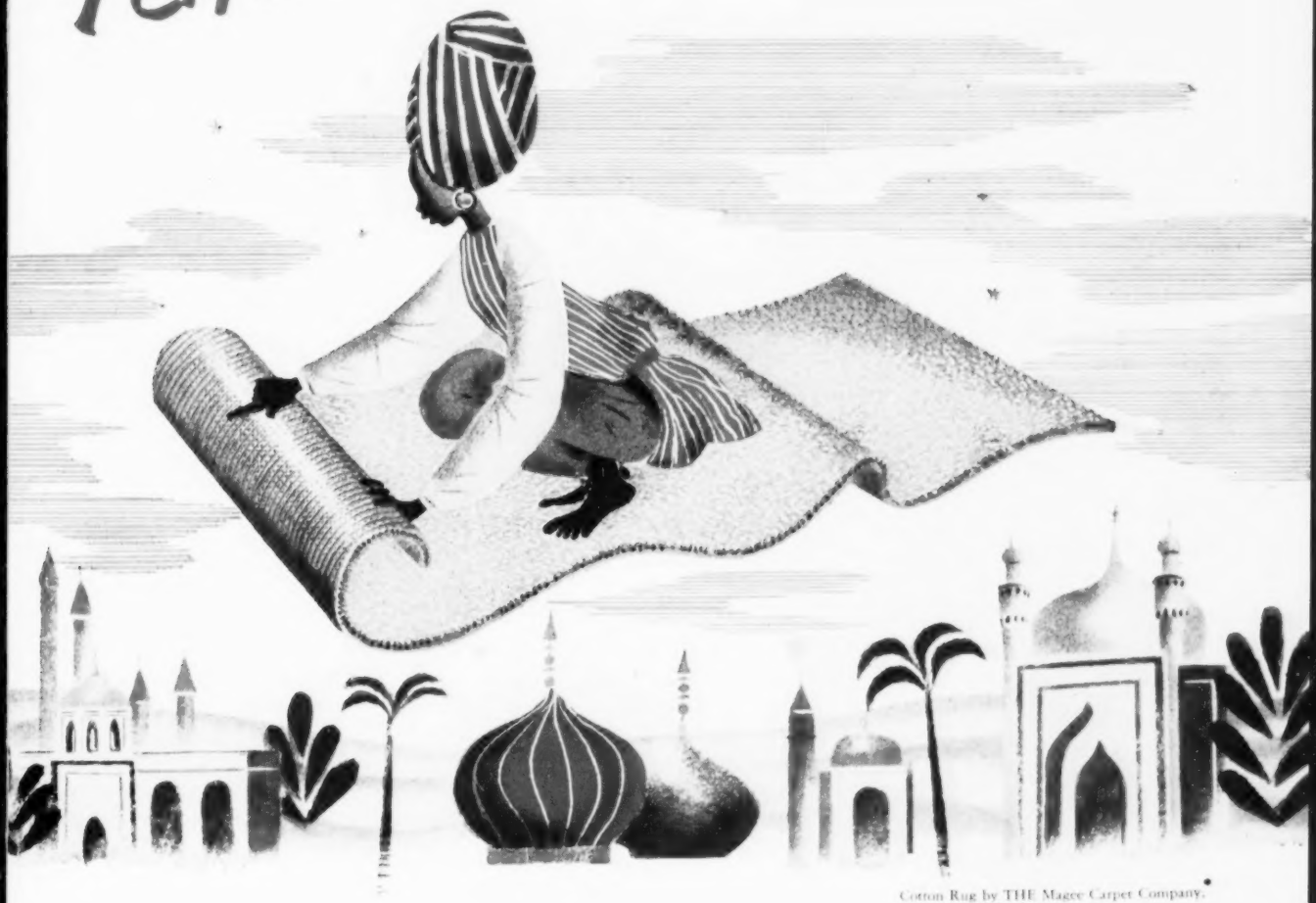
City ..... *State* .....

FOR YOUR PROFIT'S SAKE — FIND OUT ABOUT BOTH

R. P. ADAMS CO., INC., BUFFALO 17, N. Y.

LOOK HOW LOTOL

Performs carpet magic!



Cotton Rug by THE Magee Carpet Company, in 15 beautiful colors.

Here's an achievement cotton carpet manufacturers everywhere will be glad to hear about. It means finer quality carpets *at no greater cost!*

"LOTOL"® is the magic compound — an amazing new latex from the laboratories of Naugatuck Chemical. Especially developed for cotton rug backing, it's now being used by Magee*. And look at the advantages it brings.

Locks pile for life! New LOTOL anchors the face yarn to the carpet backing *flexibly, permanently.*

Improves carpet properties! This remarkable new compound gives carpets finer "hand" or body, more resilience, greater weight, better feel, and good tacking strength. What's more, it prevents raveling, wrinkling, and slipping.

Impervious to the strongest dyes! Even 8 hours in boiling dye won't harm this backing. There's no discoloration or breakdown!

And the luxurious, odor-free carpets can be cleaned *time and time again* without danger of shrinking!

Wonder-working LOTOL compound, now available to the industry — is just one more reason why Naugatuck Chemical is first in latices — a reliable source of the finest basic materials for the finest finished products.

For more information on Lotol and the profitable possibilities it offers you for coating, bonding, or finishing products of all kinds, send the coupon below today.

*THE Magee Carpet Company, 295 Fifth Avenue, New York 16, N. Y.

Naugatuck Chemical

Division of United States Rubber Company

NAUGATUCK, CONNECTICUT

IN CANADA: NAUGATUCK CHEMICALS DIVISION, Dominion Rubber Company, Limited, Elmira, Ontario

Rubber Chemicals • Aromatics • Synthetic Rubber • Plastics • Agricultural Chemicals

Reclaimed Rubber • Latices

Naugatuck Chemical, 313 Elm Street, Naugatuck, Conn.

Please send further technical data on Lotol to:

Name .....

Title .....

Company .....

Address .....

City ..... Zone ..... State .....

"NO, YOU DOPE, I SAID THE HARNESS FOR THE DOBBY!"

SEYCO
Products

WARP SIZING
- Softeners
- Binders
- Penetrants
- Ty-In Penetrants
- Shuttle Dressing

WET PROCESSING CHEMICALS AND AUXILIARIES
- Dye Assistants
- Penetrants
- Rewetting Agents
- Sanforized Fabric Oils
- Detergents
- Scouring Agents
- Softeners

NIAGARA TWIST-SETTER
Yarn Conditioning Penetrants

Of course you need the right materials for *your* job. The SEYCO man knows the best product to use for your conditions. He's an old hand at the game. Call him today.

HEADQUARTERS FOR TEXTILE CHEMICALS

SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

SEYCO

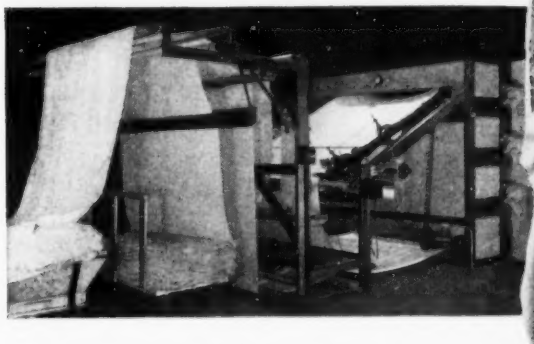
PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •

HUNTER *equipment*

safeguards quality at Milliken

Milliken fabrics are favored by leading designers who demand the finest materials as background for quality garments. To safeguard its excellent reputation Deering Milliken & Co. maintains constant quality control throughout its entire operation.

It is only natural, therefore, that you'll find Hunter equipment in Milliken plants. In fine mills throughout the world Hunter "plus production" equipment is used to finish a wide variety of ***worsteds, woolens, synthetics, blends*** and ***cottons.***



The unique Hunter High Speed Uniform Tenter Dryers produce more yardage, on a wide variety of fabrics, at lower steam, labor and power costs. Deering Milliken and other leading mills everywhere use these efficient pin tentering units for faster, more uniform drying. Send for BULLETIN UTD.

plus production

- efficient operation of modern equipment
- less down time of equipment
- quick, easy repair . . . rapid parts delivery

JAMES HUNTER

MACHINE COMPANY

NORTH ADAMS, MASSACHUSETTS FOUNDED 1847

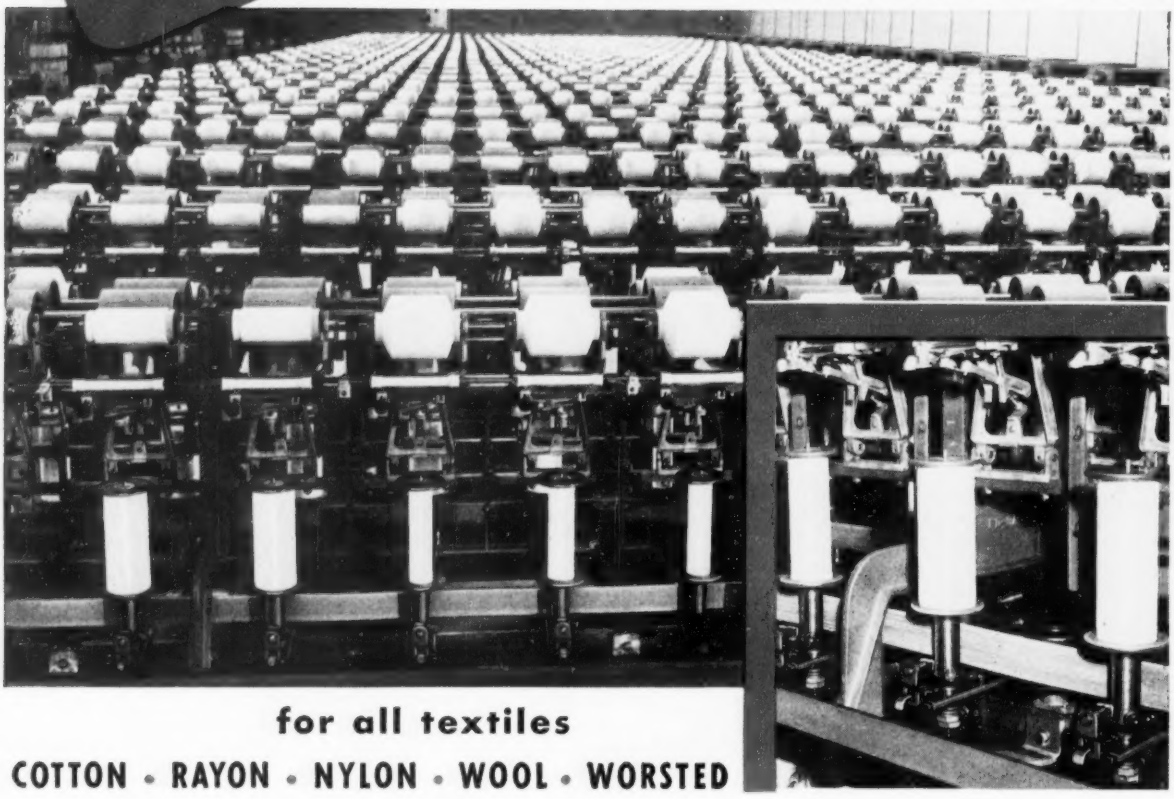
BUILT BY HUNTER . . . IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS, MASS.

For further information use Handy Return Card, Page 200

Marquette ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING



for all textiles

COTTON • RAYON • NYLON • WOOL • WORSTED

Starting with a test frame of Marquette Spindles and Brackets in 1946, this company now has more than 200,000 of each in its various mills — producing yarns of highest quality. The spindles are operating with large packages at very high speeds, and are showing important savings in power and maintenance costs. The result is *more yarn at lower cost.* We'll be glad to arrange a test installation in *your* mill to prove that you too can get the same advantages from Marquette Roller Bearing Spindles. Contact our home office or one of our representatives.

PROTECTED BY U.S. AND FOREIGN PATENTS AND PATENTS PENDING

The Marquette METAL PRODUCTS COMPANY

CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS • PRECISION PARTS AND ASSEMBLIES
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • FUEL OIL INJECTORS

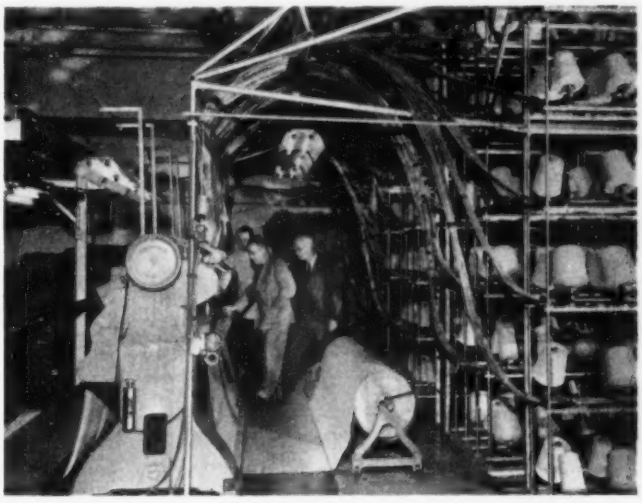
News IN BRIEF

Atlantic City Show Being Planned Well in Advance. A meeting was held in Boston recently at which preliminary plans for the American Textile Machinery Exhibition (Atlantic City, April 26-30, 1954) were discussed. For the textile industry, the show bids fair to be the greatest educational event ever held, according to William K. Child of Draper Corporation. Theme of the exhibition will be "Education through mechanical progress." Exhibitors at the show are hopeful that key men and supervisors from the mills will attend, as well as top executives, who, for the most part, visited the last exhibition.

No Shift Change, No Pay. At Dan River Mills, employees who refused to transfer from one shift to another get no unemployment compensation benefits, so ruled Judge A. M. Aiken.

Appreciation for Marshall Plan Aid. Visitors from Denmark, which country received aid under the Marshall Plan, have been highly appreciative of that assistance. Say that it raised the standard of living and politically accomplished its original aim.

12-Denier Yarn Not to Solve All Problems. High hosiery officials do not believe that availability of 12-denier yarn, in itself, will solve the industry's problems. Considerations impending: It must be knit into a practical stocking that is acceptable to the trade, and a niche must be found for it in the regular merchandising organization.



Four Yards of Cotton Carpeting Per Minute

The growing importance of cotton to the carpeting industry was underscored recently when the Magee Carpet Company announced it has started large scale production of its first full line of cotton carpeting.

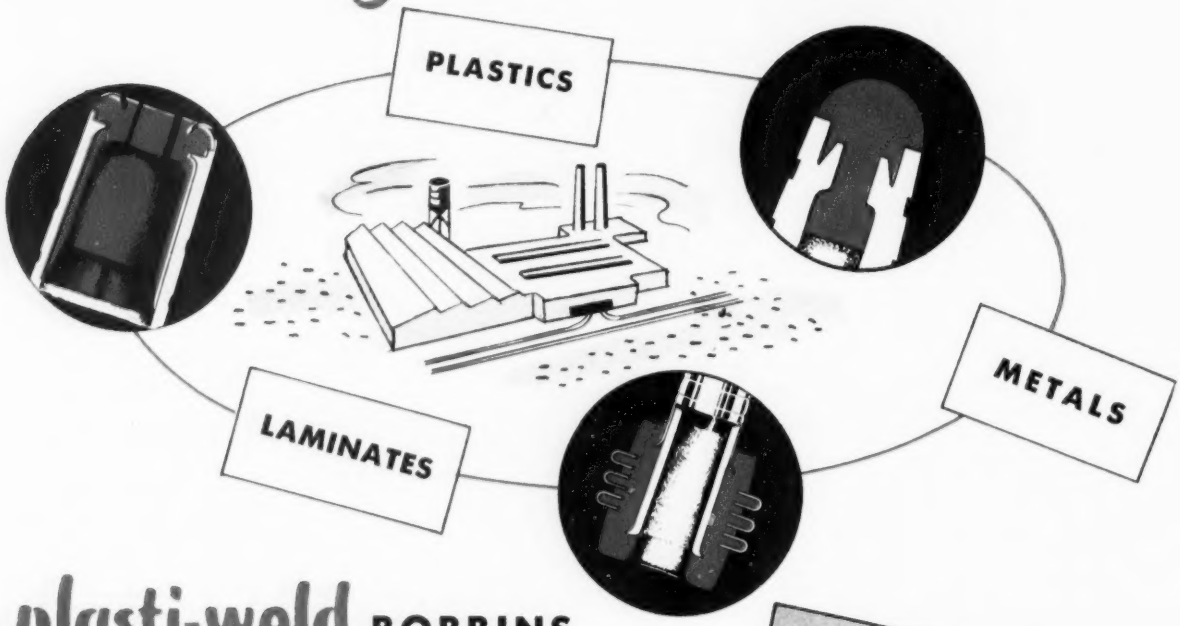
Heart of Magee's new manufacturing facilities in Bloomsburg, Pa., is a giant tufting machine capable of matching the output of 20 conventional carpet looms. The 14-foot wide machine operates like a giant sewing machine. Its 1,100 needles "stitch" the cotton yarn into a backing of twill weave jute and kraft material. A double-decker creel, holding 30,000 pounds of cotton yarn, feeds the tufting machine as it produces 2 to 4 yards of carpet — in 9 or 12 foot widths — each minute.

The secret of Magee's cotton carpet construction is reported to be a new synthetic plastic latex, called Lotol, developed jointly for this application by Magee and Naugatuck Chemical Division, United States Rubber Company. A coating of the plastic on the back of the carpet locks the individual loops to the carpet backing. Each loop will withstand a 9-pound pull — approximately the breaking point of a cotton loop. The latex also gives the rug body, durability, and "hand."

Following the coating operation, the carpet is dyed.

Need Aid on Safety? Here's a Film. "Pick Your Safety Target" is an all-color cartoon film based on actual accident-reduction plans within industry. Available from National Safety Council, it features a foreman beset with an accident-ridden department and sets forth plans for detecting and eliminating accident causes.

TAILORED TO *Your* MILL'S REQUIREMENTS



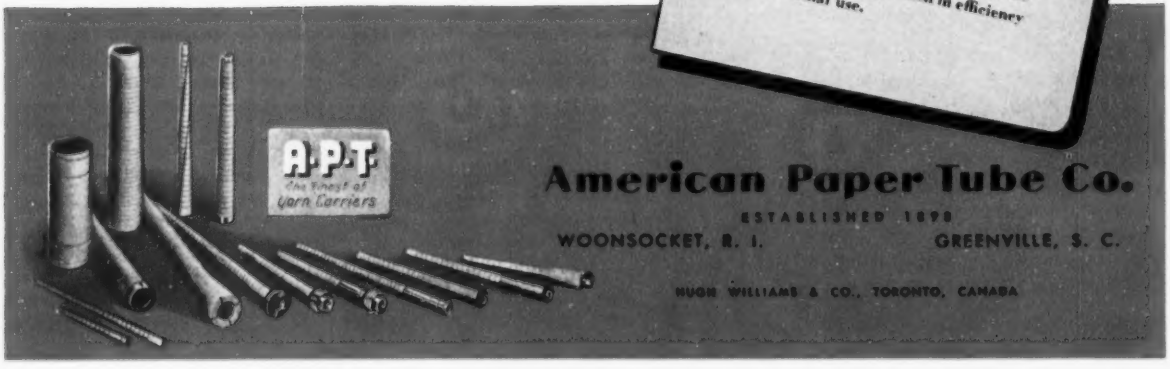
plasti-weld BOBBINS

By patented "Plasti-weld" construction, the ideal materials for each area of the bobbin are synthesized together in an inseparable unit that retains its precision permanently. Obviously, the A. P. T. "welding" method offers wide possibility of modifications to suit varying mill practices . . . so that you get the maximum benefits of the most modern bobbins.

Consult A.P.T.

SOME ADVANTAGES OF USING A.P.T. CARRIERS

1. **SURFACE** of correct texture, groove and finish for free but controlled delivery of the particular yarn.
2. **STRUCTURE** by nature resilient and proof against chipping, splintering or cracking; of composition and hardness for the particular need, with light weight.
3. **MOISTURE RESISTANT** due to impregnation; of fibre construction inert to warping and distortion.
4. **UNIQUE DURABILITY**: retain their "brand new" degree of performance throughout their years of life. They do not "wear out" or diminish in efficiency from normal use.



American Paper Tube Co.

ESTABLISHED 1898

WOONSOCKET, R. I. GREENVILLE, S. C.

HUGH WILLIAMS & CO., TORONTO, CANADA

55 YEARS OF RESPONSIBILITY FOR EFFICIENT AND ECONOMICAL CARRIER SERVICE

ACMI Year Hence Plans. In 1954 (April 22-24) the American Cotton Manufacturers Institute will hold its annual meeting at the Jung Hotel in New Orleans. This March 26-28 the association meets at the Palm Beach (Fla.) Biltmore Hotel. The 1954 meeting in New Orleans ends on a Saturday, and the Atlantic City Show begins the following Monday. A fast train schedule out of New Orleans Saturday night would put convention attendants in Atlantic City Monday morning almost in time for the show's opening.

One Knitting Industry Show Now. The two knitting trade expositions, the Knitting Arts Exhibition and the Knitting and Allied Crafts Exposition, which have up to now been held in alternate years, will hereafter be merged into a single show, according to a joint announcement by the presidents of the three sponsoring trade associations. So that trade benefits may become immediately available, the new plans will be put into effect at once. The Knitting Arts Exhibition for 1953, to open in Atlantic City in April, will be sponsored by the underwear and outerwear associations, as well as by the hosiery association. Arrangements for the KACE originally scheduled to be held in 1954 have been cancelled. The consolidated show will be held biennially; the next of the new Knitting Arts Exhibitions will be held in 1955.

Addition to Labor Force. Under the Displaced Persons program, up to June 30 last year almost four hundred thousand immigrants arrived in this country. Estimates are that 230,000 joined the nation's labor force (less than four-tenths of one per cent of the total civilian work force), 31% of them settled in the state of New York.

Multi-Million Ad Campaign. This year DuPont is conducting a nation-wide advertising and promotion campaign to the tune of several million dollars, pushing its five textile fibers (rayon, acetate, nylon, Orlon, Dacron) under the general theme of Modern Living. In product information the company already furnishes motion picture films, distributes booklets and other data, and supplies speakers for schools to promote its fibers.

Tricot Fabric Task Force. Committee D-13 of the American Society for Testing Materials has set up a task group to develop standard test methods for tricot knit fabrics.

Man-Made Fiber Capacity. According to the Organon, the current overall man-made fiber capacity is 1,838,000,000 pounds annually; the estimate is that by October of 1954 the capacity will have risen 24 per cent.

News in Brief

NLRB Annual Report. The "16th Annual Report of the National Labor Relations Board" may now be secured from the Superintendent of Documents, Washington, D. C., for seventy-five cents per copy. The report (346 pages) lists the number of cases filed during the year and recounts the total decisions rendered.

To Test Foreign-Made Equipment. In the near future an industry-wide research organization will run practical tests on the new Hibbert size box (see TI for

Mr. Mill Executive: What Is Your Opinion? Your Plan?

(Names of men and companies will not be disclosed.)

Reprinted below are extracts from addresses of the heads of three state textile associations. They appeared during 1952 in TEXTILE INDUSTRIES and referred to operations, over-production, sales, and price structure.

When the addresses were made, activity in the textile industry was lagging; prices had tumbled. Some recovery has now been made. But the activity curves of the textile industry through the years resemble those of the scenic railway (see page 77).

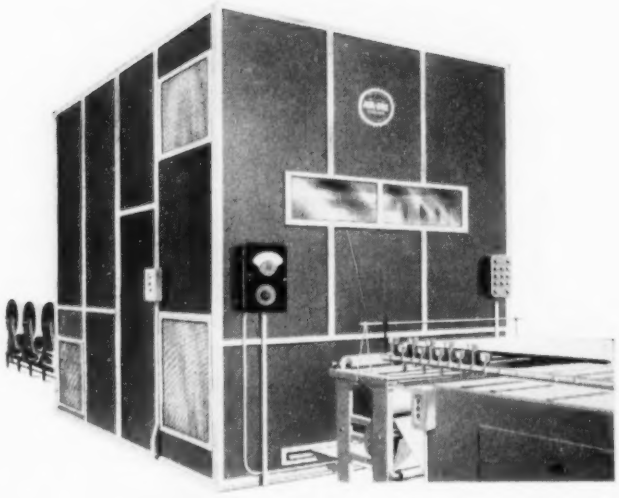
Official concerted action by the industry is, of course, impossible. But what do you, as a mill official, expect to do in your own organization in the future to help maintain the price structure and prevent a flooded market?

The editors would like to have your opinion. All names of men and organizations will be kept in confidence.—Eds.

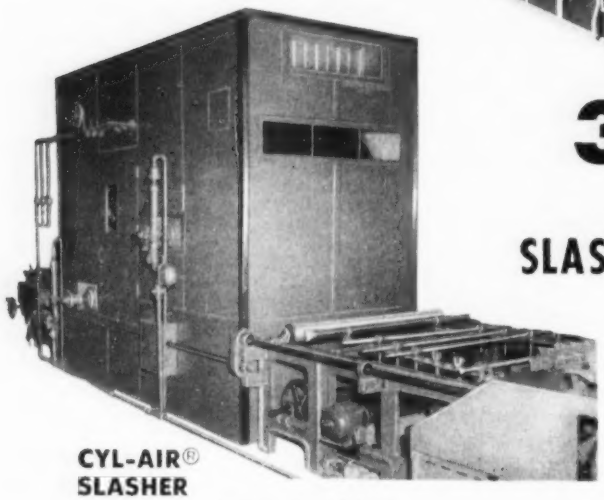
"Since it is necessary that we have sufficient productive capacity to meet the normal and abnormal demands that are at times called for, then we at times may expect to be faced with chaotic conditions, unless we learn to control and regulate our productive facilities to current demand. In our past endeavor to try and stem this adverse tide we have too often fallen into the error of thinking that our best interests could be served by trying to level out production by fluctuating prices, instead of leveling out prices by fluctuating production." — *Carl R. Harris, president, North Carolina Textile Manufacturers' Association.*

The speaker] presented options to the industry of taking the attitude of "survival of the fittest" or, he said that it can calmly and realistically review the operating policies and practices and determine whether in the interest of permanent stability and continuous prosperity it can afford to maintain the multiple-shift overtime operations to which it has become accustomed during the period of abnormal demand. . . "We may well consider whether the reduced operating costs resulting from the third shift are not more than offset by the depressing effect upon our price structure which is caused by the excess production of the third shift." — *Henry W. Swift, president, Cotton Manufacturers Association of Georgia.*

. . . . one of the uncertainties facing the industry is "how much money are we going to give away before we begin to exercise sound reasoning and good judgment in the operation of our mills and the distribution of our products." — *D. H. Morris, III, president, Alabama Cotton Manufacturers Association.*



AIR-DRI SLASHER
® (Patented)
A high-capacity, hot-air type that is satisfactory for cotton, wool and spun synthetics. Drying rates as high as 1500 lbs./hr.



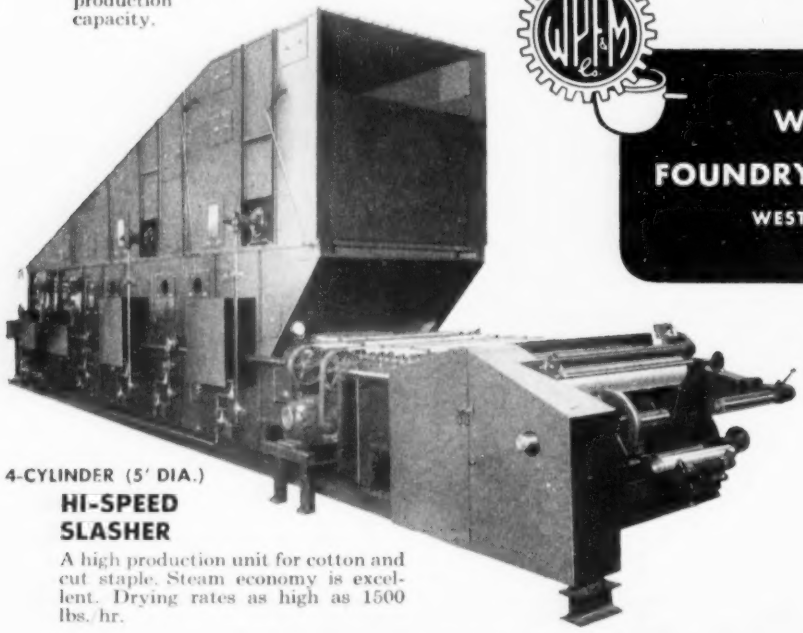
CYL-AIR® SLASHER
(Pat. Pending) A new type of dryer that combines benefits of hot air and cylinder methods of drying. It is a highly versatile unit with big production capacity.

3 MODERN WAYS
TO STEP UP
SLASHER ROOM PERFORMANCE

WPF&M Slasher Units skillfully combine the many advantages of new slashing principles and advanced machinery techniques. Hourly drying rates are increased. Quality is improved, and operating costs lowered.

Whatever your slasher room requirements, whether you're running natural or synthetic fibers . . . light or heavy warps . . . small run or full production . . . it will pay you to investigate the modern line of WPF&M Slashing Units.

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA



4-CYLINDER (5' DIA.)
HI-SPEED SLASHER
A high production unit for cotton and cut staple. Steam economy is excellent. Drying rates as high as 1500 lbs./hr.

WRITE FOR DETAILS

We will be glad to send you more information on the WPF&M Slasher Line, or, if you wish, make a survey of your slasher room without obligation.

February, page 93) and a new 4-roll drawing frame, the latter having already been accepted in England. Claims are that the drawing frame will reduce variation by 50%.

Mickey Ups German Hose Sales. Children's half-hose printed with such Disney characters as Mickey Mouse and Donald Duck are reported to be selling well in Germany.

Slot Machine Interesting, But Few Sales. Merchandising hosiery via slot machines is not going well in one foreign country, but the advertising value is said to make the venture worthwhile. People look, but don't buy.

Test Methods for Plastic Users. Plastic Coatings & Film Association has made available to users of plastics the standard test methods (in booklet form) to aid them in selecting the materials best suited to their individual requirements.

Professor Ball to be Honored. Professor Herbert J. Ball, head of the Department of Engineering at Lowell Textile Institute, will receive the Harold De Witt Smith Memorial Medal for outstanding achievement in the field of textile fiber science and utilization. Committee D-13 of ASTM selects the recipient.

NLRB Cites Boycott. The National Labor Relations Board has ruled that a union violates the boycott provisions of the LMRA if it calls a strike to force a primary employer to cease using non-union materials, even though the union has no direct dispute with the supplier of such materials.

British Textiles to be Okeh. "In spite of the many years of depressed conditions which have existed in the cotton industry in Britain, there exist the enterprise and will to improve productivity and thus make a substantial contribution to the recovery of the British economy," reported the ten U. S. cotton textile experts who visited Britain last year. The Americans pointed out that the "cotton industry in Lancashire lacked no technical information that would increase productivity," but the team felt that Lancashire's management and labor had not always applied the available store of technical knowledge as fully or as rapidly as the urgency of the times demanded. [For more information on this subject, see page 121.]

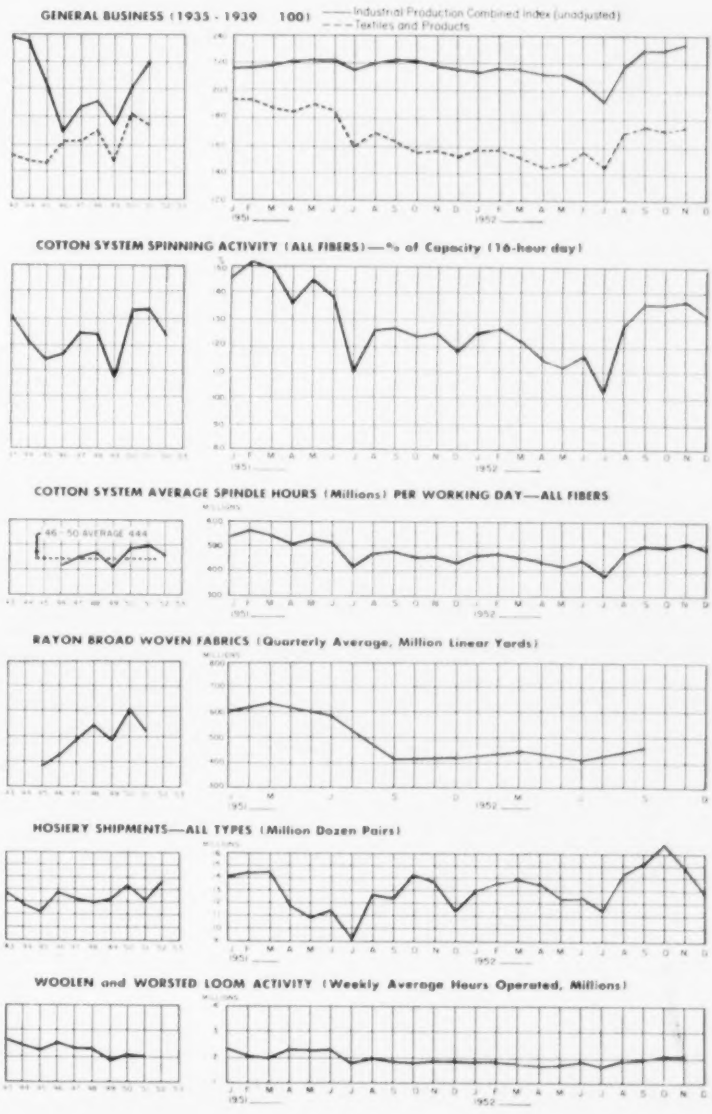
Basic Rules to Aid Salesmen in Textiles. Here are the four basic rules to help people in sales and related capacities in the textile industry, as laid down by Donald B. Tansill of M. Lowenstein & Sons, Inc.: (1) Read trade papers and magazines (2) learn about your competitors (3) devote at least one

(Continued on page 167)

News in Brief

Textile Industry Activity Charts

Source of information: Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.


GENERAL BUSINESS (1935 - 1939 100)
Industrial Production Combined Index (unadjusted)
Textiles and Products
COTTON SYSTEM SPINNING ACTIVITY (ALL FIBERS)—% of Capacity (10-hour day)
COTTON SYSTEM AVERAGE SPINDLE HOURS (Millions) PER WORKING DAY—ALL FIBERS
46 - 50 AVERAGE 44.4
RAYON BROAD WOVEN FABRICS (Quarterly Average, Million Linear Yards)
HOSIERY SHIPMENTS—ALL TYPES (Million Dozen Pairs)
WOOLEN and WORSTED LOOM ACTIVITY (Weekly Average Hours Operated, Millions)

IMPROVED... Package Dyeing With SONOCO'S DYTEX® TUBE

with PLASTAVON SLEEVE

Precision Paper Products

A superior filter for package dyeing — designed to give you clean, even, "clear through" penetration. Standard sizes 5/8" I.D. x 6 3/4" long and 1 5/8" I.D. in varying lengths. Special sizes available. The 5/8" x 6 3/4" tube can be furnished in certain colors. The exclusive Plastavon Sleeve allows more even dye distribution and better control of "flow." Also reduces slippage in primary winding.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT.
PHILADELPHIA, PA. GARWOOD, N. J. LOWELL, MASS. GRANBY, QUE.

DEPENDABLE SOURCE OF SUPPLY

sonoco — SOLD THE WORLD — PAPER CARRIERS
REG. U.S. PAT. OFF.

Knitting Arts Exhibition
Atlantic City
April 27-May 1, 1953
Booths 373 and 374

AN EXECUTIVE *Views*

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industries.

MOST READERS of TEXTILE INDUSTRIES will recall that during the last session of Congress a great hue and cry was raised in an effort to have government contracts placed in so-called "distressed areas." We were never quite certain what a "distressed area" was, but we gathered from some of the oratory that it must be an area in which there was an unusually large percentage of unemployed people. The theory was that if the government could place its contracts in that sort of an area that it would help to relieve unemployment. This attempt pretty well fizzled out.

Now, however, comes Congressman Lane, a Democrat from Massachusetts, with a bill which would wrap this situation up tightly and leave few, if any, loopholes. Congressman Lane's bill provides that the Secretary of Labor shall set up geographical areas which will most accurately reflect "the state of employment in each such area" and after he has done this he shall make at least four surveys and investigations each year to determine the extent of unemployment in each of these areas.

After the Secretary of Labor has done these things, the stage has then been set for the awarding of government contracts in areas of unemployment. Congressman Lane's bill indicates that government contracts are to be placed with plants in these areas when a certain percentage of unemployment has been reached, but he does not specify what this percentage shall be. Rather, he leaves it to his colleagues in Congress to complete this particular portion of his bill. At about this point, the bill begins to get confusing because it specifies that contracts for the armed forces shall be placed with contractors who "will undertake to provide for the employment of additional individuals in one or more of such areas." Such contracts may be awarded without regard to competitive bidding.

In short, it seems that if your plant is in an area in which there is a certain percentage of unemployment, and if you will indicate to the government that you will hire a couple of more people if you are given the contract, then you can stop worrying about competition because you are very likely to get the contract. The congressman gave no indication of what this legalized "boondoggling" would do to the nation's economy.

The New Secretary of the Army

Whatever the outcome of Congressman Lane's proposal to place defense contracts in areas of unemployment, the textile industry, as well as all other American business, may be thankful that Robert T. Stevens is the new Secretary of the Army. Bob Stevens has made a record for himself in the textile industry as being a man of great energy and ability, and also a man of high integrity. These are qualifications which have long been needed in the top posts of our government.

Mr. Stevens was Chairman of the Board of J. P. Stevens & Company, a position from which he resigned when he accepted the army assignment, and he had been prominent in industry-wide affairs through his activities with the American Cotton Manufacturers Institute. He had been a director of ACMI for several years and only a few months ago had completed an important mission as Chairman of the American delegation to the International Cotton Textile Conference (T.I. December 1952).

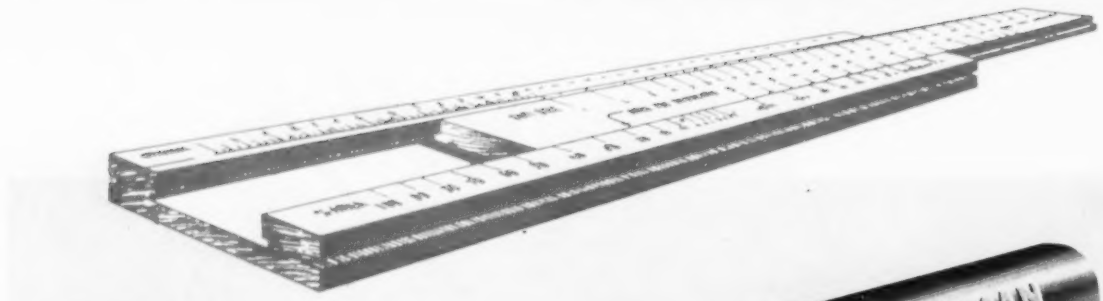
All loyal and honest Americans can take satisfaction in the appointment of Bob Stevens.

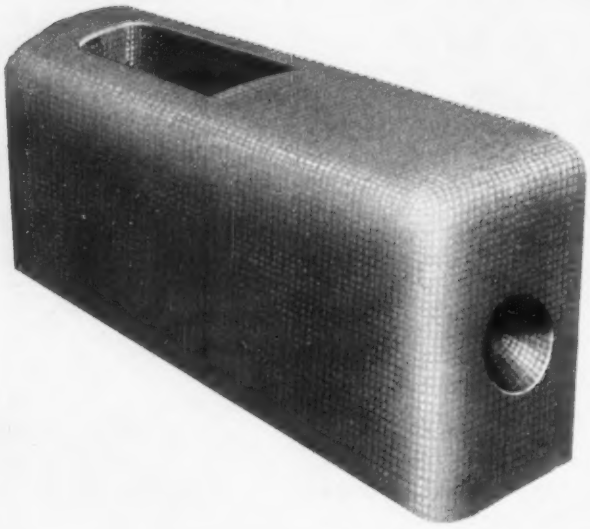
Bale Tie Fires

When we wrote about "tar spots" in this space several months ago we hoped that we had heard the last of coated bale ties. We were wrong.

Most of you will remember that several years ago many of the bales of cotton which were received at your mill were bound with steel ties which had been dipped in some sort of rust preventive coating. It was decided that some of this coating was coming off on the raw cotton, and that it was going through the various mill processes to wind up finally as tiny spots on the finished goods. These have been referred to as "tar spots," "bale tie stains" and "Alabama measles." The origin of this last term is obscure.

At any rate, manufacturers of bale ties were finally induced to leave off this coating on the theory that we would rather have rust than tar. This seemed to help the situation somewhat but has not completely eliminated spots. The latest fly in the ointment, however, is that the railroads are claiming that these uncoated ties are creating a fire hazard. They point out that bales of cotton frequently shift about the floor of a box car and that the metal-to-metal contact which results when the uncoated ties skid across the floor is causing a very high incidence of box





Manufactured by The Denman Tire and Rubber Company

Mill men who have written the specifications for Denman Pioneer Pickers measure by this standard: "Lowest Cost Per Loom Per Year."

To assure minimum cost per loom a picker must be tough—but not at the sacrifice of other loom parts. Denman pickers are built to the tested degree of hardness which gives greatest "wearability" *without* damage to picker, picker stick, or shuttle.

The performance of Denman Pickers on your looms will convince you that *correct hardness*, plus Denman's superior resiliency and absolute uniformity, absorb the shock of heavy shuttle blows at less total expense per loom.

How do you measure picker performance?

Exclusive Sales Representative

THE TERRELL MACHINE COMPANY, Inc.

CHARLOTTE, NORTH CAROLINA

car fires. They suggest some sort of coating.

Where all of this will end nobody knows, but perhaps one solution would be to go to an aluminum tie. Several experiments have been conducted on this and it seems probable that aluminum ties can be made which would have sufficient strength and which would, of course, be entirely rustproof and would not need any coating. The use of aluminum would also eliminate the fire hazard. Naturally, there is a question of cost involved and no one has come up as yet with the answer as to whether or not the aluminum people can supply a satisfactory tie at a price which will be competitive with steel ties.

Taft-Hartley

As one legislative day follows another and as committee hearings drone on into the afternoon and early evening, it becomes all the more apparent that something is going to be done about Taft-Hartley during this session of Congress. Some of the shifting of feet which has gone on has been rather difficult to follow, but no one can doubt now the importance of this particular issue for this particular session of Congress.

One thing this writer feels rather strongly about is the retention of the "free speech" provisions of the Taft-Hartley Act and a strengthening of these provisions so that the National Labor Relations Board will not be able to disregard the intent of Congress. When we had the old Wagner Act, untold abuses went on because the employer was afraid to say what he had on his mind, knowing that he would be hauled up before an administrative tribunal to answer for his alleged wrong doing. One of the purposes of the Taft-Hartley law was to correct this injustice, and we would like to see every American continue to have the right to say what he thinks.

As most readers know, there are a number of state laws which prohibit union membership as a condition of employment, and again it seems very important that this "right to work" be protected. Those who say that every working man should have the right to join a union must, if they are logical, also say that every working man should have the corresponding right *not* to join a union. In like manner, one section of the Act provides that employees shall have the right to "refrain" from all activities which have to do with joining or forming labor organizations, and, again, we have the very strong feeling that this protection should be continued. We have seen enough of what is happening on the New York docks to be certain that this protection is necessary.

These are not all the sections which should be retained in Taft-Hartley, but it is certainly the feeling of this writer that they are some of the more important ones.

Mar. 15-19—123rd national meeting, **American Chemical Society**, Hotel Statler, Los Angeles, Calif.

Mar. 18-20—Meeting of **Committee D-13, American Society for Testing Materials**, Park-Sheraton Hotel, New York, N. Y.

Mar. 26-28—Annual convention, **American Cotton Manufacturers Institute**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

April 9-11—Annual convention, **Alabama Cotton Manufacturers Association**, Buena Vista Hotel, Biloxi, Miss.

April 18—Spring meeting, **Textile Operating Executives of Georgia**, A. French Textile School, Georgia Institute of Technology, Atlanta, Ga. Topics to be discussed: carding and spinning.

April 20-24—**National Packaging Exposition**, Navy Pier, Chicago, Ill.

April 22-23—Spring meeting, **The Fiber Society**, New Orleans, La.

April 23-25—Annual convention, **Cotton Manufacturers Association of Georgia**, Boca Raton Hotel and Club, Boca Raton, Fla.

April 27-28—Annual convention and conference, **National Association of Hosiery Manufacturers**, Claridge Hotel, Atlantic City, N. J.

April 27-May 1—**Knitting Arts Exhibition**, Auditorium, Atlantic City, N. J.

April 27-May 8—**British Industries Fair**, Heavy Industry, Castle Bromwich, Birmingham, England; consumer goods, Olympia and Earls Court, London.

May 7-9—50th anniversary convention, **Phi Psi Textile Fraternity**, Penn-Sheraton Hotel, Philadelphia, Pa. Hosts: Philadelphia Textile Institute and Philadelphia Alumni Chapter.

May 18-22—**Materials Handling Exposition**, Convention Hall, Philadelphia, Pa.

May 25-30—Annual conference, **Textile Institute**, Llandudno, North Wales.

May 28-30—Annual convention, **South Carolina Textile Manufacturers Association**, The Cloister, Sea Island, Ga.

June 15-19—**Exposition of Basic Materials for Industry**, Grand Central Palace, New York, N. Y.

June 18-20—Annual meeting, **Southern Textile Association**, Mayview Manor, Blowing Rock, N. C.

June 29-July 3—Annual meeting, **American Society for Testing Materials**, Atlantic City, N. J.

July 27-31—**International Exposition of Fabrics, Fibers, Finishes, and Yarns**, Waldorf Astoria Hotel, New York City.

Sept. 10-11—Fall meeting, **The Fiber Society**, Lowell, Mass.

Sept. 17-19—Annual national convention, **American Association of Textile Chemists and Colorists**, Stevens Hotel, Chicago, Ill.

Oct. 1-2—Annual convention, **Quartermaster Association**, Lord Baltimore Hotel, Baltimore, Md.

Oct. 15-16—47th annual meeting, **North Carolina Textile Manufacturers' Association**, Carolina Hotel, Pinehurst, N. C.

1954

April 26-30—**American Textile Machinery Exhibition** (sponsored by American Textile Machinery Association), Atlantic City (N. J.) Auditorium.

Oct. 4-9—18th **Southern Textile Exposition**, Textile Hall, Greenville, S. C.

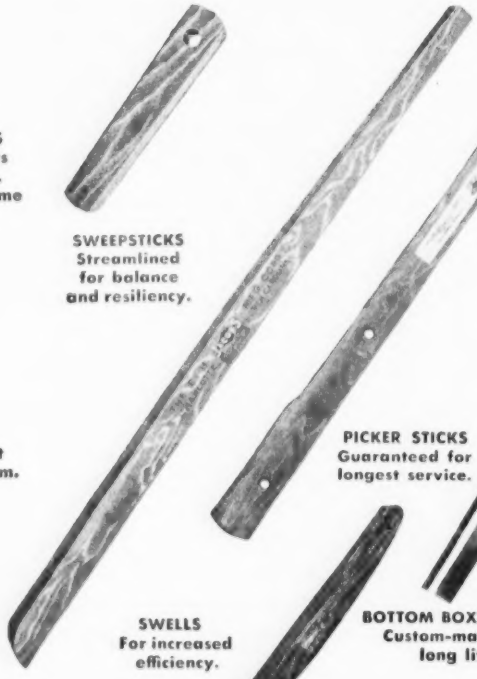
JACOBS

PLYWELD® Loom Necessities TAKE PUNISHMENT!

Outlast Hickory 15 to 1

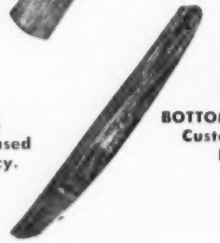
SERRATED HOOKS
For Draper Pickers on Plyweld Sticks. Eliminate troublesome screws, easily adjusted.

SWEEPSTICKS
Streamlined for balance and resiliency.



POWER STICKS
Outlast fiber and wood many times.

HOLDUPS
Designed to meet any Holdup problem.



PICKER STICKS
Guaranteed for longest service.

CLOTH ROLL BLOCKS
Durable.

SWELLS
For increased efficiency.

BOTTOM BOX PLATES
Custom-made for long life.

RACE PLATES
Uniform throughout.

Only JACOBS makes PLYWELD®
U. S. Pat. No. 2,503,711

THE BULLARD CLARK CO.

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

NORTHERN DIVISION
Danielson, Conn.

NEW Equipment AND MATERIALS

Coiler Conversions Save Labor

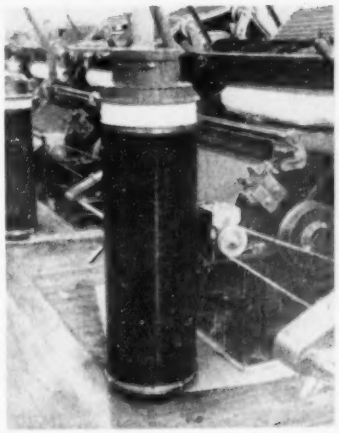
Parts are now available to change card and comber coilers from 10" and 12" to 14" x 36", 14" x 42", 15" x 36", and 15" x 42" can size. By changing from a 12" x 36" can size to one of these larger cans more sliver can be placed in the cans as shown below:

Can Size	% Increase
14" x 36"	60 to 65
14" x 42"	100 to 105
15" x 36"	100 to 105
15" x 42"	120 to 125

Also available are parts to convert drawing frame coilers to accommodate 14" x 36" and 14" x 42" cans.

Gossett Machine Works, Inc., West Franklin Ave. Extension, Gastonia, N. C.

For additional data, request item C-701, using Handy Return Card on page 200.



Cotton card equipped with Gossett coiler that accommodates 15" diameter sliver can.

High-Speed, Full-Fashioned Underwear and Outerwear Knitting Machine

A new knitting machine for the high speed production of full-fashioned underwear and outerwear is capable of running at a speed of 60 courses per minute with a needle bar width of 28 inches. Four selvages may be fashioned at the same time, thus providing fully shaped armholes while a shaped neck is being produced.

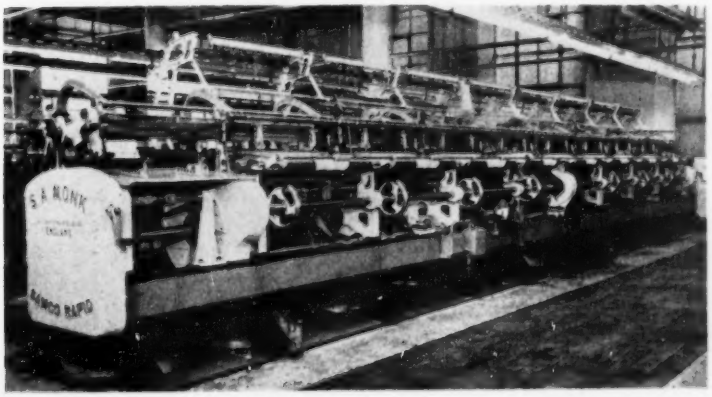
An outstanding feature of this machine is the carrier drive and constant lead mechanism. The conventional friction type has been replaced by a purely mechanical type of positive drive controlled by synchronous means with the carrier travel control so that the lead of the carrier over the slurcock remains constant at any width of work. The starting and stopping of the carriers are accomplished entirely without shock or jar as they are accelerated from rest and increased to full speed in an involute curve and decelerated to a stop in the reverse way.

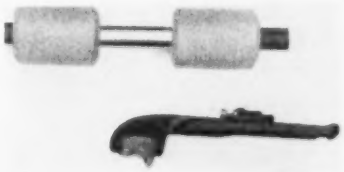
The machine can be supplied with a number of attachments for the production of a V-neck; for splicing; for three-color odd course striping, and for course counting.

S. A. Monk (Sutton-in-Ashfield) Ltd., Mansfield Rd., Sutton-in-Ashfield, England.

For additional data, request item C-110, using Handy Return Card on page 200.

The Monk full-fashioned machine for underwear and outerwear.





Saddle and Top Roll Combination Eliminates Oiling, cuts Power Costs

A saddle and top roll combination recently introduced eliminates oiling and reduces power consumption as much as 33% in the drafting sections of spinning frames. Characteristics of the new assembly derive from modernized design of the top roll and from use of Rulon, a low-friction bearing material.

Boss diameter of the top roll has

Big Advantage

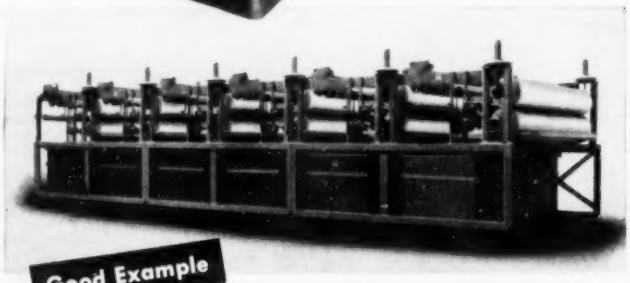
to look for—or include—
in any textile machine

SEALMASTER
BALL BEARING UNITS

SEALMASTERS are pre-lubricated and self-aligning. Positive, permanent, centrifugal sealing keeps dirt out—keeps lubricant in. There's no housing wear—operation is smooth and quiet. And now another SEALMASTER exclusive, "Zone Hardening" of the *ball path* of the inner race, still further improves their performance—still further increases the span of trouble-free bearing service you can count upon with SEALMASTERS.

SEALMASTERS are standard equipment on many textile machines. When you buy new equipment, or whenever you replace bearings, be sure you get the advantages of SEALMASTERS It's worth insisting upon!

Four specially designed SEALMASTER ball bearing units for use on textile machinery. Each unit retains all of the exclusive features of the standard SEALMASTER line. Housings are designed to meet machine manufacturers' specifications.



Good Example

COOK—P & N MACHINE CO., INC. This Cook Style D 100" Face Washer offers many advantages. Stainless steel tanks can be removed without disassembling any other part. Guide rolls are skyed for more complete washing. The entire machine is designed for maximum convenience, efficiency and long life. IT IS EQUIPPED WITH SEALMASTER BALL BEARING UNITS.

SEALMASTER BEARINGS

74 Ridgeway Avenue, Aurora, Illinois
A DIVISION OF STEPHENS-ADAMSON MFG. CO.

FACTORY REPRESENTATIVES AND DEALERS IN ALL PRINCIPAL CITIES

been reduced to 3/8" to allow use of a thicker cot wall, thus providing more cushion which gives a larger bite area to grip fibers and will possibly allow some weight reduction. Diameter of the hardened steel arbor is 3/8". It is easier to turn and travels fewer feet per minute, thus causing less heat to be generated and less wear on the saddle bearing.

Roll-picking and cleaning are substantially reduced. The design of the front saddle permits immediate installation on the frame without the additional purchase of new back saddles or stirrups if not desired or needed. Top rolls may be buffed and cots changed on the same equipment and by the same methods now in use; the thicker walled cots allow more buffing, lengthen cot life, and reduce this cost factor.

Dixon Lubricating Saddle Co., Bristol, R. I.

For additional data, request item C-124, using Handy Return Card on page 200.

Solvent Cleans Motors While Assembled

A solvent that cleans electric motors and generators while they are still assembled is called Shaler Generator-Motor Cleaner. It is listed under the Reexamination Service of Underwriters' Laboratories, Inc.

Motors and generators can be cleaned two different ways with this solution:

(1) A motor can be completely submerged in the cleaner, then plugged into electric current and allowed to run for from three to five minutes. The motor is then removed from the dip tank and dried with compressed air.

Submerging motor in Shaler cleaner does not affect gasoline- or oil-resistant wiring.

(2) The cleaner may be sprayed into the intake side of a motor, while it is in operation.

Motors which have been accidentally submerged in water as a result of fires, flood, etc., may be cleaned without "baking." The cleaner does not affect wiring or insulation which is gasoline- or oil-resistant.

The Shaler Company, Waupun, Wis. (C-228).

NEW Equipment

Thread Cutter for Any Battery Type Loom

Advantages of the Jacobs "Very-best" thread cutter for any battery

(Continued on page 201)

Want More Information on These Items?

Use Handy Return Card on page 200, giving Key Number (C-391, etc.) which appears after the name of the supplier of the item in which you are interested. Or, if you prefer, write supplier direct.

Improved pintle assembly for Saco-Lowell lap winders can be applied as a changeover on all models since 1927. Also available is a laminated phenolic plastic spool featuring light weight and high flexural strength.

Saco-Lowell Shops (C-301).

A seam closing attachment, known as "Loktag," for Union Special 39200 Class machines eliminates necessity for bartacking such garments as panties, T-shirts, sweaters, tricot slips, etc.

Ginsberg Machine Co., Inc. (C-302).

For steam cleaning indoors with complete safety from fire hazards or flooding of working area is the compact, portable, fast action, all-electric "Standard" Steam-Jet Cleaner with automatic balanced control.

Livingstone Engineering Co. (C-303).

Rubber transmission belt called "Drivesall" made with all rayon fabric is 25% stronger and has up to ten times greater flex life than cotton fabric belts made with same number of plies.

The B. F. Goodrich Co. (C-304).

Flow test kit for laboratory research and field flow checking work is portable and adaptable to a wide range of applications. Performance is predictable with high accuracy. Eliminates check calibrations formerly required for low flow rate work.

Fischer & Porter Co. (C-305).

An electric "stand-up" fork truck, the "Stoway," can operate within its own length and is designed for warehousing, etc., where close quarters and narrow aisles demand high maneuverability and where driver must continually mount and dismount.

Clark Equipment Co., Industrial Truck Div. (C-306).

Line of magnetic starters, contactors, and relays incorporating a simple five-unit construction is easier to install, works better, and lasts longer.

Cutler-Hammer, Inc. (C-307).

Self-contained industrial heaters, which deliver large volumes of heated air for heating large areas that cannot be heated by more conventional methods, may be floor, wall or ceiling mounted.

Westinghouse Sturtevant Division (C-308).

The Model 2005 static detector clips onto a Keithley Vacuum Tube Electrimeter, providing a convenient and highly sensitive combination for detecting and locating static charges.

Keithley Instruments (C-309).

Resistance to hot sulphuric acid over a broad range of concentration is offered by Carpenter Stainless Steel No. 20, which contains 29% nickel, 20% chromium, 3% copper, and 2% molybdenum.

The Carpenter Steel Co. (C-310).

Shaft-mounted speed reduction drives of 20:1 ratio feature improvements in gears, bearings, housing, lubrication, and oil sealing systems. Series designated "Shaft-King."

The American Pulley Co. (C-326).

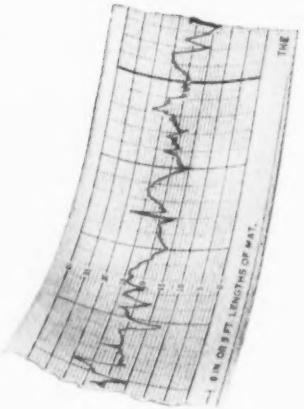
"We improve quality evaluation with Brush Textile Uniformity Analyzers"

The Cotton Department of the Deering Milliken Service Corporation reports: "Chart records made by the Brush Uniformity Analyzer are of great value in our research, development, and mill service . . . uniformity tests are highly important in the evaluation of new equipment, processing conditions, and modifications to machinery".

Likewise, in actual mill operations at Deering Milliken, Brush Analyzers improve quality control. The instruments provide a definite numerical value for quality of yarn, roving and sliver, and also aid in trouble-shooting.

The Brush Uniformity Analyzer, originally designed by the Institute of Textile Technology, is highly sensitive; irregularities as short as ½ inch in a length of yarn are detected. The chart record is immediately available, and can be kept for future reference. Yarn samples can be charted as fast as 1000 feet in 3 minutes. The instrument can be operated by anyone after a brief instruction period.

The Uniformity Analyzer® is sold and serviced through regular Brush representatives located throughout the U.S. For information write Brush Electronics Company, Dept. T-3, 3405 Perkins Avenue, Cleveland 14, Ohio. Canadian Representatives: A. C. Wickman Limited, Toronto.



This sample chart of roving indicates gross deviation from nominal weight per unit length.

BRUSH ELECTRONICS COMPANY

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZOELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT

BRUSH ELECTRONICS

formerly
The Brush Development Co.
Brush Electronics Company
is an operating unit of
Clevite Corporation.

Shorts and Remnants

► Shorts & Remnants is not one to criticize the new administration so shortly after the inauguration, but a certain laxness among civil service employees already has developed; the man at the Post Office stamp window has quit licking stamps for patrons. They must now lick their own.

► And while we were adapting ourselves to a career of stamp-licking, in comes a Washington press report that members of Congress are not receiving enough salary and expense reimbursement to break even. Our understanding is that the people are the bosses of Congress, and they have suffered the same malady for years. The disease is contagious among lower echelons.

► Congress appears to be the theme this month because from down in the valley our vice-president friend wants 25 copies of "Is It Wrong to Resist Robbery?" from October TI to send to Congressmen. We give them credit for knowing the answer is "yes," but a refresher course does no harm.

► Sometimes S&R gets so involved in servicing technical inquiries that it loses its perspective. When a letter came in which asked simply, "Where might I get a copy of Textile Industries?" it had us stumped. But it did please us to know the answer to that question.

► We could answer this one too. A competitor brought up with an advertiser the question of the amount of information we have published on wet processing (dye, bleach, finish). A check over the last 16 months showed TI has run nearly 50% more on that particular subject than the next general textile magazine, including the one which brought up the question. TI's annual index proves the point. We like such questions—wish we had thought of it ourselves.

► Strange, isn't it, about what makes news? "Advertising Age" informs us that in the advertising field (publishers, newspapermen, ad agencies, etc.) the average age at death is 61.27 years, an increase of four years in longevity since 1951. How the average age jumped four years in a two-year period beats us, but then we never were good at quadratic equations.

► That set us to checking longevity records in TI. We find that textile men average 64.8 years. Since we're both publishers and mill folks, readers can expect no relief on S&R for awhile.

► Plastics, which have taken over many textile markets, have discovered a field of increased use. Plastic piping. And mill men wouldn't care if all the plastics went into pipes. But textiles have their new fields too, such as armored shorts for the troops in battle. S&R could use them too when at the end of a dictated record and after the secretary has transcribed it he decides differently and tells her to "kill it."

► But the secretary's problem doesn't compare with the mill which got its specification for a new fabric from the Air Force. Nothing was required except a fabric that is light weight, but of such warmth that if the wearer were forced down in the Arctic, it would protect him from the cold; that it be sufficiently buoyant to keep him afloat if he parachuted into the sea; and of such material that if forced down in the desert, he could eat it.

► With such typical specifications, it is no wonder mill men are eccentric and some crazy as a loom. Even the chain letter fad appeals to them, though it is strictly verboden by postal regulations. Time inside would be well spent, however, because there are textile mills behind the high walls.

► Just why we should receive this bit of classified information, we don't know; but here it is. A certain Mr. Scott is known as the Bubble King. It seems that he is a pioneer in the bubble industry, and to top it off has invented several novel types of bubble shooting guns. Remember, that's classified dope.

► Come to think of it, a bubble gun might be useful. Here's a letter from a Canadian mill wanting a report from one of our government bureaus. A letter had gone direct to the government agency, but the implication was that maybe we should goose the bureau for quicker action. The bubble gun might get quicker results than our previous methods.

► On this one, we also sent the man to the bureau. He wanted to know the number of people who own clothing and other articles made of these fibers: acetate, Acrilan, Dacron, dynel, nylon, Orlon, and Vicara. But we do appreciate the confidence he had in us, and we asked our underground editor to come up with the answer.

► To the friend that wanted our article on "Strip Lighting" we sent clip sheets, with the further recommendation that he attend the 1954 ACMI convention in New Orleans, where strips are the vogue. (It's awful, we know, but not as bad as the one about the fellow who named near beer being a poor judge of distance.)

► Our strictly textile dissertation this month is on India where TI has large circulation: India is a big country with lots of textile mills and people, more people than mills. On the map it is pink and can be readily distinguished from the United States, which is green. Jute, precious stones and children grow there. India is north of the Indian Ocean, which is wet. Its chief river is the Ganges, but it has many others. All of them are wet. Contrary to popular opinion, the colored dot on the forehead worn by many women in India does not denote a caste observance; it is a beauty spot and may change color to match the wearer's clothes. On the west India is bordered by the Arabian Sea and on the east by the Sea of Bengal. Both seas are wet.

► Nothing on this page may be reproduced without specific permission. Not that anyone wants permission.

► With India and the copyright laws covered, you'll be further interested to know that Orkin (exterminators) have a fellow working for them named Roach. Forgive us. Please turn the page and Keep Your Eye on TI. Selah.

STRAIN RESISTANT... At every important point the butt — the beard — the shank — Textile Spring-Beard Needles have unusual strain resistance. They start with a special steel formula, are precision tempered, undergo rigid scientific tests — automatic and electronic — to finish as mirror-smooth needles with the toughness demanded in today's high speed knitting operations.

Strain resistance is but one feature of superior Textile Spring-Beard Needles. Try these long-lasting needles for better performance, lower production costs and beautiful fabrics.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile
SPRING-BEARD NEEDLES

For Full-Fashioned Knitting
For Tricot Knitting

ARROW / Latch Needles

If you want to get a union in your mill, simply pick up the nearest telephone. If you don't want a union in your plant, perhaps you can spend the next five minutes in profitable reading. Because here are tips from a mill man who has traveled the road.

So You Don't Want a Union?

By A MILL EXECUTIVE
As told to a member of the staff

EXCLUSIVE

SAINT PETER himself couldn't run a textile mill or a department fairly and without favoritism unless he used the principle of seniority rights. Sure, I know that installing seniority rights is the first thing a union does. But we have mills in the industry that ignore that principle; it's an open invitation to organizers.

Remember, people in the mills, whether organized or not, hold dearly to their seniority. And they will get it one way or another.

Take, for instance, the employment of new people. Many mills hire new employees for the first shift, completely disregarding the desires of older employees on the second or third shifts who want to make the change. Mill management might not take the preferences of these older employees into consideration—but the union does. In this respect the union supplies the correct answer.

Management also overlooks seniority when there is opportunity to upgrade an employee. How many mill men consider putting a roving hauler or sweeper on a better job when there is an opening? The union watches this closely. With the union, upgrading is a matter of principle. It is also a principle that management should adopt.

Although I do not agree with them, I have heard mill men contend that a plant can't be run properly without a union. But when notice is taken of some of the stupid things that overseers and secondhands do and say, I am almost in agreement.

Another mill executive was on the train one day, returning from a NLRB hearing. One thing this man learned at the hearing was that management is a - - - to start with, and it's up to him to prove that he isn't. At this same hearing, the man reported, he was amazed at what some supervisors will say and do. From the actions of his own supervisors, he admitted that his plant was lucky not to be organized, and that it probably should be organized. He was hurrying home to take corrective measures before it was too late.

Grievances of the employees can be real or they can be imaginary. The imaginary ones are the most difficult to dispel. But whether the grievance is real or imaginary, it must be handled by the immediate supervisor in a reasonable manner. Some supervisors or secondhands, when asked an innocent but important question by the employee, will tell him to mind his own business. The supervisor either does not take time to answer the question or does not know how. Union men find time to discuss a grievance or a question, and they know the answers.

The men in the first line of supervision and closest to the employees simply must spend whatever time is necessary to get to the crux. When they do not, it is because they fail to realize how tremendously important it is to get the facts and present a logical answer or solution. The industry has many men in top management who can discover the real grievance of an employee after supervisors have failed. They may be smarter than the supervisors, but the real reason stems from management's understanding that time is required to get to the basic problem of the employee, and that whatever the time spent in so doing is time spent profitably. Maybe that is why top management is top management.

When supervisors and secondhands do not know the answers to questions that employees may ask, it is a reflection on top management. At one mill the union officials were interpreting the union contract for both supervisors and superintendents. A class was started for the supervisors so that they could learn the answer to practically any question that an

Commercial Standard For Flammability

Flammability of Clothing Textiles, Commercial Standard CS191-53, having been endorsed by the industries concerned, became effective on January 30, 1953, the Commodity Standards Division, U. S. Department of Commerce has announced.

The standard represents the combined opinion of an Industry Committee representing cotton and rayon producers, and fabric manufacturers, finishers, converters, wholesalers, and consumers, coordinated by the American Association of Textile Chemists and Colorists and the National Retail Dry Goods Association.

It is to serve as a guide in the manufacture and sale of only those commodity textiles which are not dangerously flammable. It provides the public with the maximum protection from such textiles and at the same time permits the unrestricted merchandising of the great majority of those fabrics which are known to have no unusual burning characteristics.

The standard includes standard methods of testing clothing and textiles intended for use in clothing; establishes three classes of flammability: Class 1, covering those textiles generally accepted by the trade as having no unusual burning characteristics; Class 2, covering those textiles recognized by the trade as having flammability characteristics between normal and rapid and intense burning; and Class 3, covering those textiles recognized by the trade as being unsuitable for clothing because of their rapid and intense burning. It establishes limiting requirements for identifying each of these three classes.

Printed copies of the standard will be available later from the Superintendent of Documents. Until that time mimeographed copies of the recommended standard accepted by the industry (TS-5131) may be obtained by addressing a request to Herbert A. Ehrman, Commodity Standards Division, United States Department of Commerce, Washington 25, D. C.

employee might ask and so that they could interpret the union contract equally as well or better than the union officials. This was training that paid off.

Secondhands and supervisors should know the answers to questions and the interpretations of a contract even better than top management because they are in touch with the employees constantly and have greater need for the information. Although management must sign the contract, the supervisors must live with it.

I have worked both in union plants and free plants, and I have found that it takes a better supervisor to run a department in a union mill than in a non-union one. There are supervisors today in non-union mills who couldn't get to first base in an organized mill. When you get a union in your mill, you learn immediately if you have the wrong type of supervisors.

Management and supervisors must have the patience of Job and never show temper. I once bit the end off a pipe stem during an interview, but those on the other side of the table never knew I was mad.

Where unions are concerned, the textile industry has done a very poor job of public relations. Too often public relations are taken for granted, but it is important that the people of the community think about the textile mill and its problems.

However, when discussing the effects of mill unionism on the community, don't present the case solely as a problem of the mill. Remember, the local merchant also has his own problems and will not immediately be particularly interested in yours. Point out how the merchant and his business may be touched; the mill man may not have an investment in the community and can move on to another job, but the merchant and his fellow citizens have their stakes in the town. It might behoove them to look at the general picture to see what would happen if the union moved in. Certainly their perspectives will be different if they think about their own futures and not just yours.

When a good job of public relations is done, the mill may be able to operate under adequate protection in times of strife. Of course, there are some towns and cities where at this late date it is practically impossible to operate a mill successfully without a union. But that gets back to the job of public relations that has not been done.

There are factors that can be stressed. They have been helpful in a number of instances throughout the industry.

(1) Get to know personally as many of the employees as you can. This is practically impossible in larger mills, but the nearest approach to knowing them all, the better off you will be.

(2) Attend as many gatherings as you can that your people attend.

(3) Don't be so busy that you can't speak a friendly word as you go through the mill. You can't always "eat lunch with the boys," but neither do you have to erect a throne to sit on.

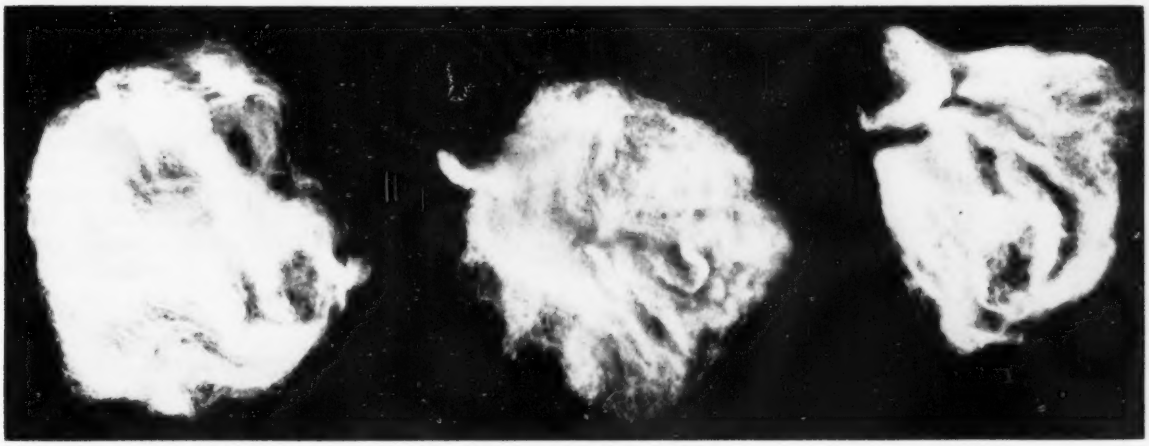
(4) Watch the out-of-mill behavior of both supervisors and management (how they carry on). Employees may in their own eyes make mistakes and behave in a manner they know to be wrong, but they don't expect the boss to make the same mistakes. This is a human trait. To put it bluntly, we, as bosses, are paid to behave.

(5) Some non-union mills don't pay in rates and fringe benefits the going rate of the locality. That's an open invitation to organizers.

(6) Get to know the members of the mediation board so they will respect your opinions and understand your motives.

(7) Stupid acts of supervisors have been mentioned; also watch for loop holes created by union stupidity. The union capitalizes on our mistakes. Turnabout is fair play. Remember, union shortcomings are usually repeated.

To sum it up, those who get unions just aren't cooking on the front burner. Those who don't, their right actions outnumber their wrong actions.



Garnetted Nylon | Garnetted and Carbonized Nylon | 56s Wool

Tips for woolen-system-processing of

Garnetted Nylon-Wool Blends

► Fluff stock before making sandwich lay by one run through picker or some other opening machine.

► Apply emulsion liberally to aid in control of static electricity. Carbonized nylon waste seems to be free of static and have a "woolly" feel.

► Set fancy wire close (3-3-4 or 3-3-5); surface speed of fancy should be 46 to 50% greater than surface speed of cylinder.

► Run all-wool roving waste on card for about two hours prior to processing all-nylon or nylon-wool blends.

By WILLIAM J. CROFTS

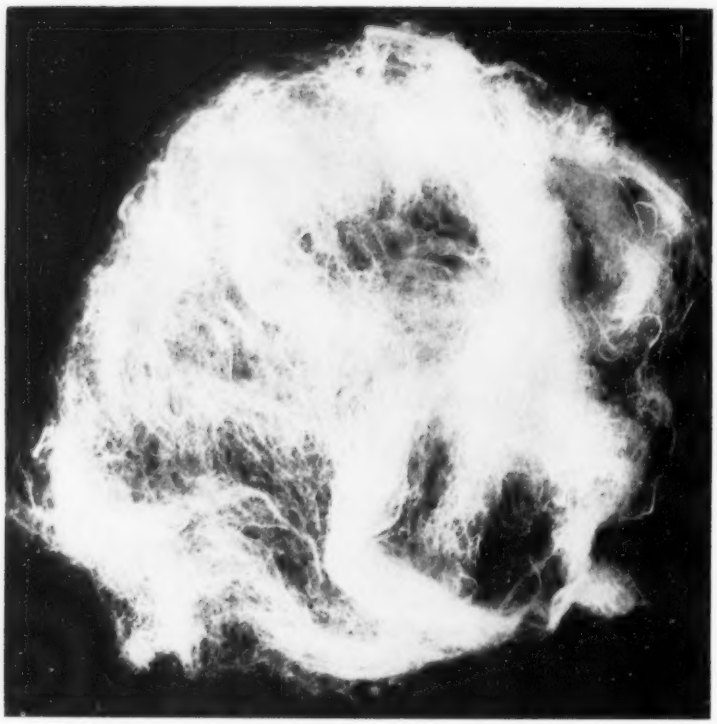
EXCLUSIVE

GARNETTED nylon, because of its great tensile strength, is one of the most valuable of the synthetics for woolen blends. Although the price is relatively higher than some other synthetic fibers, its excellent spinning qualities, together with a close resemblance to wool, make this fiber economically desirable. The addition of 20% of nylon to a woolen blend of reworked stock gives far more strength to the yarn than adding the same amount of wool, and the yarn can be spun to a finer run or cut.

Normally this fiber is straight, but for use in woolen blends it is crimped. This gives a curl to the fibers, and to the casual observer resembles wool very closely and gives the yarn a desirable woolly appearance. The straight nylon fiber lacks the resiliency of virgin wool, but crimping the fiber gives the yarn a certain amount of resiliency.

Beautiful sweaters can be made from yarn of 100% nylon, which has been made on the woolen system. These sweaters closely resemble the best all-wool knitted sweaters, but the nylon content produces a softer, silkier finish than wool. Although not equal to all-wool garments in thermal properties, 100% nylon knitted garments are dressy and especially suitable to those who are allergic to woolens worn next to the skin. The wearing qualities are excellent, will stand repeated laundering without shrinking, and for this reason soft nylon garments are especially suitable for infants' wear. In woolen blends for woven fabrics, up to 20% of nylon may be used without detracting greatly from the wool qualities of the fabric, and the increased strength and wearing qualities imparted by the nylon should be desirable for boys' wear.

The carding, spinning, and weaving operations are improved if the woolen cards are properly equipped and adjusted to handle the long nylon fiber. Some mills prefer to cut the staple to uniform



GARNETTED filament nylon waste showing loose condition of fibers and threads dispersed throughout.

lengths for ease of processing.

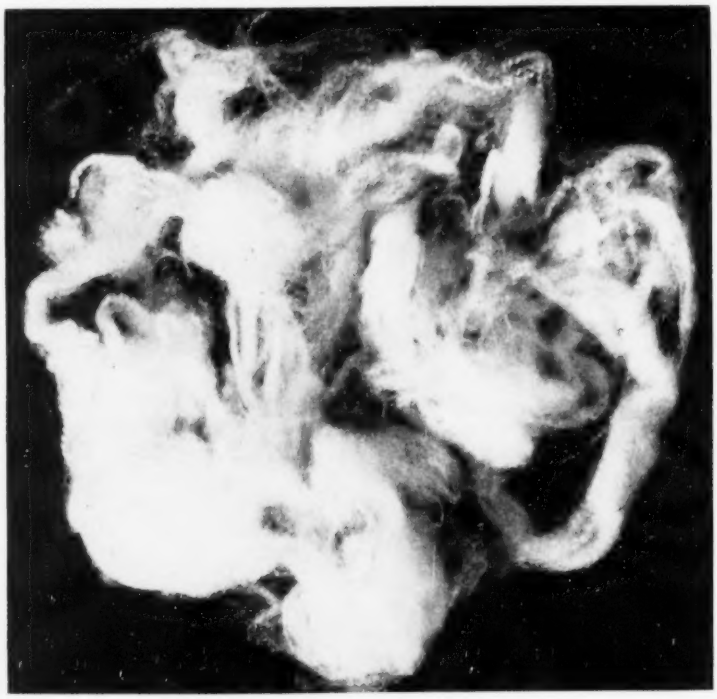
Blending; Static. Before blending garnetted nylon with reworked wool stocks, the nylon should be evenly blended, and for best results it is worthwhile to fluff the nylon by one run through a picker or some type of opening machine before making the sandwich lay. The nylon blends better with the wool stock after this preparatory opening operation. The emulsion can be applied in any quantity after combining the nylon and wool stock without ill effects. When processing nylon, static may be present in the carding operation, and a liberal application of the emulsion will help to control it. Carbonized nylon waste seems to be free of static, and I have carded many tons of 100% waste in the dry state, omitting the blending operation entirely, without any evidence of static. Carbonizing seems to impart a more woolly feel to the fiber.

Garnetted nylon waste is composed of fibers of many lengths with a preponderance of long fibers, some being six inches, so it is extremely difficult for the card fancy to raise the fiber cleanly from the cylinder wire. Such is the case with 20% blends, and especially is this true of the 100% blends. Undoubtedly this is an important factor among the difficulties encountered in running nylon on the woolen card because if the fancy does not clear the cylinder to give the doffer a chance to remove the stock cleanly, the cylinder loads up with fiber and the roving becomes pilly and rough.

Raising Stock on Cylinder. By all means the doffer card wire should be in top condition. The fancy wire should be lively and springy. If the wire is loose in the foundation, the clothing should be discarded and new wire put on this vital roll. For nylon a fairly close setting of the fancy wire is best (3-3-4 or 3-3-5), and the roll should be run at higher speeds than for all-wool blends.

The surface speed of the fancy should be at least from 46 to 50% greater than the surface speed of the cylinder. If the blend is 100% nylon, the relative surface speed of the fancy may have to be increased.

CRIMPED nylon staple in virgin condition. Note wavy appearance of crimp which is set permanently in the fibers.



More difficulty is encountered in clearing the finisher cylinder. After running the nylon for a short time, if the surface of the cylinder presents a fish net pattern, the nylon is not being cleared from the wire thoroughly. If the doffer wire is in excellent condition, the fancy is probably at fault.

I maintain the opinion that felt-face clothing on the cylinder should be beneficial. Running all-wool roving waste in the card for about two hours is helpful. This forms a bed of strippings at the base of the wire much like the wool felt on felt-face clothing. Plated wire is more expensive, but it is much smoother, and the web is easily raised above the surface of the wire.

Regular wire may be burnished by running the cylinder backwards (as when grinding) with a rotating fancy roll set into the cylinder wire. Soft charcoal is an excellent agent for polishing the steel wire and may be used in the powdered form or the pieces of charcoal may be held on the rotating cylinder by hand. This procedure accelerates the burnishing action of the fancy.

Quality Control and Research Function

In an article "Quality Control and the Research Function" to appear in the March issue of the *Textile Research Journal*, the author, O. P. Beckwith, acting director of the quality control department of Alexander Smith, Inc., attempts to show that the bonds of mutual interest between research and quality control are strong.

In large textile mills the most effective functioning of quality control, from the standpoint of research, as well as the whole organization, is to have it separate from research, according to Mr. Beckwith. Most quality difficulties arise because standards are not adhered to, he states, not because the specification is inadequate.

Quality control, as an independent function subordinate to the chief executive of operations, is, in his opinion, in the best possible position to bring about conformance to standards.

The coordinative nature of quality control and its widespread area of interest in all phases of organization actively affecting quality are shown. The vital part which quality control should play in the critical process of translating the fruits of research into successful mass production is pointed out.

In conclusion Mr. Beckwith states: "The operation of quality control stems from the use of tested management principles; setting standards, checking conformance to standards, initiating corrective action, and planning improvements. Technological skill, knowledge of the principles of organization and management, and perhaps most of all, the skillful conduct of human relations must be employed to achieve success.

"The mature and rounded quality control function fills a need in management created by the success of research and development in developing new products and processes. It links parts of the chain in the fascinating process of applying science and technology to the production of more and better goods for all our people."

Doffer Comb Stroke. If the stroke of the doffer comb is very short, trouble may develop at this point. Twelve teeth per inch on the comb blade is about right, and the up and down stroke should be at least 1¾ inches long. The comb speed will vary somewhat with the production speed of the doffer, but the minimum speed should be about 1100 rpm. Good nylon blends may be run at high production speeds and still make strong, smooth yarns; the speed of doffer comb will have to be increased correspondingly.

Nylon is not difficult to card or comb out, and worker-settings with a No. 26 card gauge are close enough for a 100% blend of nylon or blends with a large percentage of nylon. If one of the components of the blend is hard, uncarded worsted threads, the settings must be to a No. 30 gauge to card the hard threads. Garnetted nylon does not require such close settings. A more open setting is better and produces less fiber breakage.

Fancy Stripper. The length and adhesiveness of the fibers cause them to stick to and wrap around the fancy wire. A fancy stripper of some type should be provided to guard against this condition, else fine or lumpy ends of roving will be made. Nylon is a clean fiber, and the shrinkage loss in the carding operation is very low; therefore, on all-nylon blends stripping the card wire may be reduced. In fact, I have run 10,000 pounds of all-nylon between strippings and found no detrimental results, but the fancies must be working efficiently for such runs.

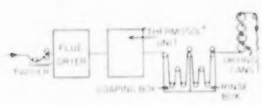
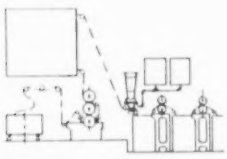
Draft of the web from the tape doffer comb to the roving spool drum should be the same as for all-wool blends, or as slack as possible. With the same draft gears nylon usually drafts slacker than all-wool, but this condition is governed by the moisture content. A very moist blend will draft slacker than a drier blend.

Spinning. The nylon roving will not draft in the spinning quite as well as virgin wool yarn, and for this reason the roving should be made about 10% lighter in weight, depending somewhat on the amount of condensing at the finisher card. A softer roving will draft better than a highly condensed one. A 30% draft is usually the best (draft 70 inches of roving out to 100 inches of spun yarn).

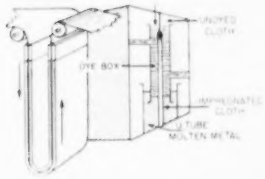
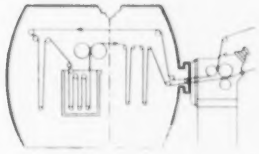
The twist sets quicker than with an all-wool roving; consequently, a softer roving is desirable. With the same amount of twist, nylon makes a stronger yarn, but the drafting and twist must be determined by trial and error and gauged by each mill according to the blends and type of yarn needed for the proposed fabric. If a lofty, bulky yarn is desired, then less condensing of the roving with less twist in the yarn will be best. If a lean, hard yarn is required, the roving should be condensed more and a higher twist applied in the spinning.

Ready Reference Chart for

Compiled from information presented during a symposium on continuous dyeing methods at the 31st annual convention of AATCC, Boston, Mass.

	Pad Steam	Thermosol	Williams—Hot Oil
			
What type of fibers, including the newer synthetics and blends, can be dyed?	Cotton (mercerized and unmercerized), spun rayon, blends of cotton and rayon, acetate and rayon blends, nylon; no practical success with new acrylic and polyester fibers	Dacron, Orlon, nylon, blends with Dacron (color exhausts on Dacron, scours out on other components; blended fiber must be unaffected by high temperature)	Cotton, spun and filament rayon, blends of cotton and rayon, certain viscose and nylon blends
What type of dyes can be applied?	Vat, sulfur, direct on all but nylon; acid and direct on nylon	Acetate colors on Dacron; limited number of vat shades, acid colors acceptable on Dacron and inefficient on nylon	Vat, sulfur colors
ECONOMIES			
1. Speed	110-120 ypm, rarely under 75 ypm	15-40 ypm for 80-95% of intermediate shades and better than 90% of acetate colors	150 ypm, 110 ypm for shade OD 7 on heavy duck
2. Dye efficiency	Maximum fixation of dyestuff obtained	Good to excellent fixation	Optimum dye efficiency, flow of caustic and hydro controllable; cost of oil and cost of oil removal adds; dyer can run hard-to-control shades by two-step reduction
3. Minimum practical run	4000-5000 yards	1000 yards	2000-3000 yards
QUALITY			
1. Fastness **a) crock** **b) light** **c) wash**	Fast to crocking, light, and washing	Good to excellent crocking resistance for acetate and Dacron, 40-320 Fade-O-meter hours, wash resistance good for selected colors	Optimum
2. Penetration	Excellent	100% penetration	Penetration in water phase is excellent
3. Levelness	Excellent; cloth should have good preparation to avoid side to side shading	Warp streaks are minimized	End to end and side to side variations minimized in rayons; tends to cover imperfections on poorly prepared goods; oil is difficult to remove from certain heavy fabrics
4. Effect on cloth	No physical defects result	Crease recovery unaffected; tear strength unaltered	Oil is difficult to remove from certain heavy fabrics; no other deleterious effects

Continuous Dyeing Procedure

Molten Metal (Standfast)	Bond Machine	High Temperature Dyeing (Uxbridge)
		
Cellulosic fibers (wool, acetate, nylon, new synthetics now limited to lab trial), batistes, lawns, organdies, upholstery fabrics	Cotton, rayon, acetate, nylon, 41 Orlon, 81 Orlon, Dacron, Fortisan, wool, dynel, blends of these fibers, pile and flat constructions	Any fiber unaffected by high temperature; wool blends by selectivity of dyestuffs; no problem with cotton or rayon
Vats on celluloses, direct colors on cotton; sulfur colors in modified version of machine	Acids, acetates, direct, diazo, vats, soluble vats, sulfurs, napthols, pigments	All classes of dyes (must not decompose at 270 F) by selectivity; chromes require after chroming in separate kettle
30-120 ypm, full yield of light shades at higher speeds	10-120 ypm	30 ypm; a woolen or worsted will dye in 12 seconds at 270 F
Small dye wastage, reduced cleaning time between shades, mechanical beater removes excess metal adhering to cloth after exit bath; metal can be melted in minutes after period of solidification	Machine quickly cleaned between shades, seconds to resume operation after break, easy threading (automatic pressure controls for raising and lowering rolls and upper pressure units), adjustable rate of feed of dye liquor; five units occupy 8 x 40 feet; can be used for many wet finishing processes other than dyeing	Dye consumption less than conventional; fewer operatives required
Lots as low as 500 yards can be handled	250 yards is practical, as low as 50 yards possible	1500 yards
Compares favorably with older methods	Equal to other methods of continuous dyeing	Equal to or better than usual methods
Compares favorably with padsteam; uneven surface structures can be penetrated uniformly	Excellent penetration including cotton duck	Equal or better
End to end shading eliminated, side to side variations reduced	Levelness excellent with all colors and fabrics	Was problem until pressure sealing entry rolls were perfected
No more destructive than other processes	No deleterious effect; pile crushing avoided; tensionless processing	No detrimental effect

Knitter Hints No. 38

Ravel Seams on Inspection Form

RAVELING SEAMS on inspection forms saves time.

Usually the defective seams are picked out by using the fingers and hands. It is best to have one person do all of the raveling in a large mill. If it is not a full-time job, the operative may work on something else when there is no raveling to do. Raveling solely by hand involves too much handling of stockings, and often the stockings fall on the floor. Result—soiled and rejected hosiery.

Here are some "findings" that prove

Research and Quality Control Pay Off

By M. EARL HEARD
Vice-President and Director of Research
West Point Manufacturing Company

EXCLUSIVE

RESEARCH usually refers to investigations, having as their objectives the discovery of fundamental principles of general applications. Research conducted by an individual company, however, is usually directed toward specific application. In our case the objective is usually to find a better way of processing the fabrics manufactured by our plants.

The premise for research is based upon the belief that our current machinery and processing practices represent a transitory level. Improvement in the past has resulted from basic changes in the blueprints and specifications occasioned by a better understanding of fundamental facts and technical advancements.

There is still incomplete understanding of fundamental facts concerning textile quality. Technical improvements in processing and developments in textile fibers have continued throughout the history of textiles. Therefore, we have every reason to be optimistic about what research can do for the textile industry in the future.

The Job of Quality Control. Quality control is expected to take over at any designated quality level and hold it to the mark. Improvement in quality is expected to result from standardization of quality from machine to machine, operator to operator, job to job, and day to day. It is not the responsibility of a quality control group to make basic improvements, but to help production management to do the best it can with what it has.

Job of Research. Research is a long-range operation to achieve technical progress. Personnel with technical training and skill in using scientific tools, and scientific methods, are employed to study problems of a fundamental nature. Full benefits from research cannot be obtained by merely hiring scientifically trained people and providing them with a laboratory in which to work. These personnel and their laboratory must become an integral part of the company.

The author

This status is reached when (1) management and operating executives acquire faith and confidence in scientific methods, (2) corporate objectives are definite, (3) ways and means for pursuing these objectives are clearly stated and understood, and (4) personnel from management, research, and production, in their respective capacities, cooperatively plan and work toward these objectives. Coordinated activities of this nature are called Operation Research.

Practically the same things can be said for quality control. From experience, management and production must acquire faith and confidence in quality control methods, and the persons rendering this service. There must be an agreement as to objectives, and the ways and means of obtaining these objectives should be clearly understood.

Progress Being Made in Research and Quality Control. As a rule, research and quality control in the textile industry are considerably below this desired status. Very rapid progress is being made in this direction, however. It was not so long ago that textile quality, both in the finished and intermediate products, was graded on authoritative opinion confirmed by a few simple measurements and limited experimental data.

Testing equipment included grain scales, scissors and sliver

Highlights of the Article

► **Picker lap irregularity between sections at intervals as short as 1/4 in. will affect card sliver weight per yard, originating part of the yarn count variation.**

► Inch-to-inch or within-yard evenness of picker lap is more important to quality than overall weight of lap or yard-to-yard evenness.

► **Carding faults or bad practices contribute to variation in card sliver, but short-length variation in the picker lap is still the predominant factor affecting evenness.**

► Even where poor control over total lap weight is prevalent, good short-length uniformity is a redeeming quality. Studies have shown 15% to 60% variation across the width of picker laps.

► **Channeling of stock directly to next process, instead of random blending, nullifies much of the advantage of doubling.**

► Drawing frames, even of same type, do not have the same effective or actual draft. Some actual drafts range 9%, thereby increasing stock nonuniformity. But they can be corrected to have standard drafts.

► **Clean rolls in drawing offer best chance for evenness of stock. Waste and foreign matter regulate the meshing of the rolls and cause short term variation and irregular drafting.**

► Despite doubling, unevenness increases throughout the manufacturing processes.

► **With a random arrangement of fibers, short length unevenness varies inversely with the number of fibers per cross section; or, the fewer the fibers, the greater the unevenness.**

► A thick or thin place in the lap extending lengthwise over 2 in. or more affects the weight of the card sliver 100%.

► **Crosswise variation in picker laps is not distributed across the carding cylinder or doffing cylinder. A section of lap stock 6 in. wide when carded makes a web exactly 6 in. wide. A heavy streak in the lap overloads that particular section of the card.**

► Unrestricted mixing of fine and coarse fibered cottons can have considerable effect upon yarn evenness, especially in fine yarns.

► **When picker lap crosswise thickness varies from 20% heavy to 20% light, the equivalent rate of carding varies from 14.4 to 9.6 lb/hr (or an average carding rate of 12 lb/hr).**

► These factors seriously affect yarn unevenness: Picker lap short length variation, carding faults, channeled stock at breaker drawing, and channeled stock at finisher drawing.

cutting boards, reels, twist counters, and yarn skein and fabric breaking machines. Almost anyone was considered qualified to make tests after brief training.

Test results that did not "look right" were discarded. Differences in sample averages were judged important or not important, depending upon the feeling or opinion of the person analyzing the data.

As previously stated, this status has already changed and will continue to change at an increasing rate. More capable and responsible personnel are being assigned to these services. They are supplied with better, more complicated, and a greater variety of testing equipment, in order to measure all the aspects of textile quality. Inspection and testing are planned on a continuous, rather than a "trouble-shooting," basis.

More emphasis is placed on representative samples, controlling or avoiding irrelevant factors, standardizing test procedures, and calibrating testing equipment. Also, more efficient methods for analyzing data and reporting the results to management in a form that can be readily interpreted are being used.

This does not mean the cost of manufacturing is increased at the expense of profit. Actually, the reverse is true. Profits largely depend upon intelligent management; and the more management knows about its plants and the products they are producing, the more intelligently management can run its business. The status of research and quality control is becoming more important because management is convinced that profits in the long run will be improved through their application.

No Substitute for Supervisory Control. One of the first hurdles confronting research and quality control is the reluctance of operative management to accept what it may first consider a loss in authority. Supervisory control has proved its worth, and there will never be a substitute for it. Supervisory control has managed well with what information was available, and acceptance of the conditions has become a habit.

Research and quality control make additional facts and information available to production men, which they may not be able to fully understand or use immediately. Instead of a helping hand, they may consider it an affront to their ability or integrity.

Research and quality control must constantly remember that their effectiveness depends upon how well their services are accepted by those who can use them.

Quality Control Audit. In keeping with this attitude, an operating quality control program must be subjected to periodic auditing. As production processes under capable supervision can get out of control, so can routine testing and inspection. Testing instruments get out of calibration, operators can deviate from standard procedures, faults and errors have a tendency to accumulate under any routine activity, and personnel do not always have the time or opportunity to keep up with technical changes.

Quality control personnel must set up quality control checks upon themselves. In addition to these self-correcting precautions, it is desirable that they be audited by outside personnel. This may be done by a specialized group, such as research personnel in their own company or by an outside agency. Auditing is for assurance and for the same reason that we employ auditing in our cost departments and treasurer's office.

The Common Foundation. Research and quality control have a common foundation from which to work. This foundation is quality analysis. Both must have a very definite understanding of what constitutes quality in the product they are concerned with, and the relative importance of the many independent factors that affect quality. Without this information, the efforts of both research and quality control may be misdirected.

Quality is defined as any characteristic of a product or a process that is of interest to the maker or to the user. In this sense, "Quality" does not refer to superiority in worth or value only. It may also refer to size, weight, number, or any evaluation or classification that the maker wishes to produce and the consumer wishes to buy. It may apply to the raw materials, intermediate products, or to the finished article.

Measure Difference in Quality. In order to improve or control a quality characteristic, it is necessary to be able to measure or detect differences in quality. A successful quality control program, however, is more than testing. A very important ingredient is technical information which must be obtained from experience or quality analysis. This technical information provides a better understanding of the quality characteristics which are important and their relative importance to product quality.

Something must be known of the cause of variation and how it can be corrected. *From this common foundation, the objective of research is directed upward, while quality control objectives are standardized at a level currently acceptable to management.*

Although their aims are divergent, the methods of research and quality control are somewhat similar. Research, using all of this basic information plus additional technical information, initiative, and creative thinking, attempts to improve the blueprint and formulation for manufacturing operations. Experimentations are for the purpose of deciding if the changes are superior to established methods.

Research and Quality Control Operate in Different Fields: Procedure Similar. Research investigations are for the purpose of comparing different (1) inventions, (2) modifications, (3) treatments, (4) materials, or (5) conditions. Products from each source are segregated and identified. Samples of the products from each subclass are inspected, tested, or otherwise evaluated. By statistical analysis it is determined whether the products from the several sources are significantly different or if the sample differences are due only to chance fluctuations.

If the products from a new method prove to be significantly better than the products from a standard processing method, it is concluded that the new method is better and will always be better.

Quality control methods follow a similar procedure. The sources of production to be compared in this case, however, are those that normally exist in any industry. Unless constantly standardized, there will be differences in quality produced by different machines, operators, materials, and operating conditions. These differences are discovered by testing or inspecting the products of each source individually, and determining by statistical analysis if they are significantly different. Reasoning from these analyses is the reverse of research investigations.

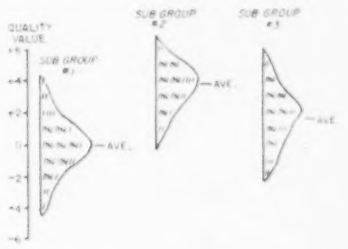
If differences are found in the quality of the products from different sources, it is concluded that there is a cause factor responsible, and that it can be found and corrected.

Quality control is a continuation of quality analysis, in order to specifically locate the sources of good and bad quality, and to notify management when quality definitely takes a turn downward. To do this, the products from the different sources are sampled and evaluated separately.

Statistical analysis of the data determines whether the samples taken from the several sources are significantly different. Management is notified which source is producing quality significantly different from the standard agreed upon, so that it can be brought back in line with the others. These steps are an adaptation of standard experimental procedure used in research investigation.

Thus we begin to see the relationship between research and quality control (graphically shown in Fig. 1). It is understandable

FIG. 1. METHODS of research investigations and quality control are similar in procedure and analysis, but the objectives are different and the sub-groups compared are different.



Research Investigations Compare:
1. Inventions
2. Treatments
3. Materials
4. Modifications

Quality Control Measurements Compare:
1. Machines in processing line
2. Operators
3. Batches or mixes of raw stock
4. Shifts, day, or other time intervals.

why research is especially interested in the progress of quality control. Quality control is a direct offspring of research. In fact, Shewhart, the father of statistical quality control methods, was a research engineer, and the methods outlined by him very definitely bear all the markings of a research mind.

Analysis of Textile Quality

WITH THESE general remarks as an introduction, let us turn our attention to textiles and the analysis of textile quality. Textile quality depends upon both the raw material and the processing that it receives. In our mills the principle raw material is cotton.

Research has supplied certain fundamental facts about the correlation of (1) fiber length, (2) staple uniformity, (3) fiber strength, (4) fiber fineness, and (5) percentage of mature fibers to yarn strength and appearance.

Quality analysis determines more specifically what fiber characteristics are required for a particular fabric of satisfactory quality. This, of course, depends upon the type of fabric and the end use required. After a fiber quality analysis has been made, *quality control attempts to maintain fiber quality at that predetermined level.*

Pickers laps are the first intermediate product of processing. Again, it is important to know what qualities of a picker lap are most desirable and their order of importance. Good and bad qualities can be counted upon to reveal themselves at subsequent processes and in the final products (see Fig. 2).

Quality of Picker Lap. Let us look at picker lap quality from this angle. Uniformity in thickness of the lap determines the uniformity in weight of sliver, roving, and yarn; therefore, it is of great importance. Uniformity in thickness can be broken down into at least four catagories: (1) total lap weight differences where yardage is the same, (2) yard-to-yard variation, (3) within yard variation, and (4) variation across the lap.

Are these so intercorrelated that an evaluation of any one will correctly determine the quality of lap uniformity? Or are they entirely separate qualities which have different effects upon stock size at subsequent processes? These are some of the questions research is called upon to answer.

Research has demonstrated that lap irregularity between sections at intervals as short as ¼" will affect card sliver weight per yard. It takes only a few simple calculations to show that ¼" of lap stock (40-50 grains) is carded into about 1 yard of card sliver. A few additional calculations will show that ½" of lap stock after carding and two processes of drawing (90 x 36 = 3200 grains or 0.46 pound) is drafted to the length of yarn ordinarily contained on a full bobbin of warp yarn. This would indicate that part of the yarn count variation originates as short length irregularities in the lap, as well as yard-to-yard variation and lap weight differences.

Fig. 3 is a graphic picture of card sliver weight per yard variation obtained from one picker lap. After carding the entire lap, every tenth yard of card sliver was weighed in consecutive order. There was a draft of about 100; therefore, the first ten specimens of card sliver came from the first yard of picker lap, the second ten

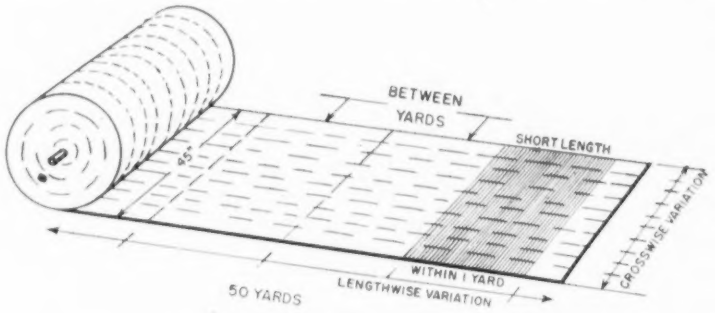
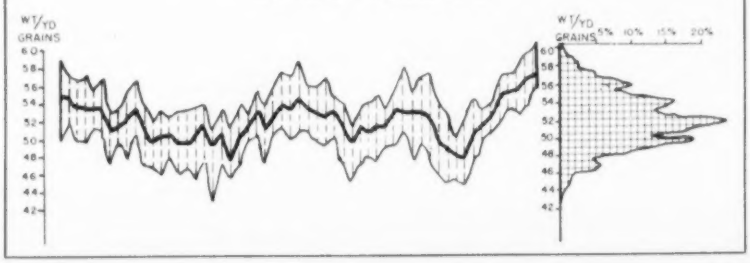


FIG. 2. QUALITY VARIABLES OF THE PICKER LAP.
1. Lap weight differences
2. Yard-to-yard variation in weight
3. Short length variation within yard
4. Crosswise variation

FIG. 3. CARD SLIVER WEIGHT PER YARD VARIATION OBTAINED FROM ONE PICKER LAP. Center line is average sliver weight; upper line is heaviest yards of sliver; lower line is lightest sliver; vertical lines show range between heaviest and lightest yards of sliver. At right of graph is frequency distribution which shows how the total variation in card sliver weight was distributed: 1% of sliver weighed 60 grains, 5% weighed 57 grains, etc. If this frequency distribution chart is imagined to be pieces of wood of varying lengths which are shaken down to one level (the base when chart is vertical), the distribution of short and long pieces may readily be seen.

Ave. Range Within Each Yard = 8 grains = 15% C.V. = 4.02%
Ave. Range Between Yards = 9 grains = 17% C.V. = 4.36%
Total Range = 17 grains = 33%



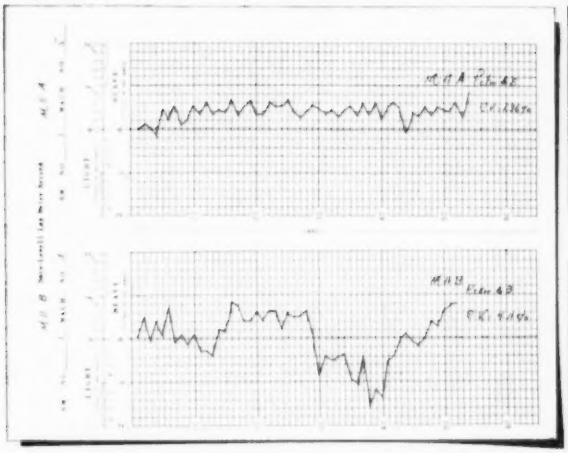


FIG. 4. YARD-TO-YARD VARIATION OF TOP LAP IS BETTER (picker from Mill A.) At first glance and according to the Saco-Lowell lap meter record, quality control men would consider that Mill A's picker is doing the best job. But see Fig. 5.

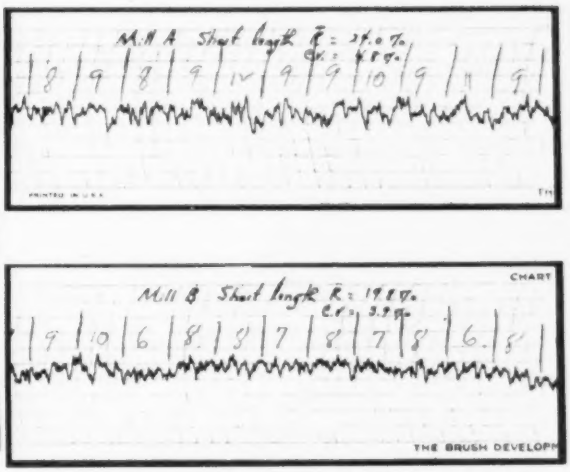


FIG. 5. SHORT LENGTH VARIATION CHECK reverses opinion of laps (see Fig. 4). Now the lap from Mill B's picker is considered the best. But go on to Fig. 6.

specimens of sliver came from the second yard of lap, and so on throughout the stock.

The center line on this graph connects the average sliver weight per yard carded from consecutive yards of lap stock. It corresponds to a Saco-Lowell lap chart, except the values are recorded in grains and are the average weight of ten one-yard specimens of card sliver. The upper line connects the weights of the heaviest individual yard of card sliver taken from stock carded from each consecutive yard of lap stock. The lower line connects the weights of the lightest individual yard of sliver taken from stock carded from each consecutive yard of lap stock. Vertical lines connecting the upper and lower lines show the range between the heaviest and lightest yards of sliver per yard of lap.

The frequency distribution on the right in Fig. 3 shows how the total variation in card sliver weight was distributed. Weight per yard is recorded on the vertical scale, and the percentage values show the relative proportion of sliver that weighed each amount. For instance, about 1% of the sliver weighed 60 grains per yard, 5% weighed 57 grains per yard, 10% weighed 56 grains per yard, etc.

Total range was 17 grains or about 33%. The average range in sliver weight from within each yard of lap stock was 8 grains per yard or about 15%. The range in the center line or the range in average values for each yard of lap was 9 grains per yard or about 17%. Expressed as coefficients of variation, the short length variation was 4.02%, the longer length variation was 4.36%, and the total variation was 6.0%.

Which of these Laps Is Better? Fig. 4 shows Saco-Lowell lap meter charts on laps representing a selected picker in two different mills. Three consecutive laps were taken from each of these pickers during a normal period of operation. One lap from each picker was tested on the Saco-Lowell lap meter, and these are the records of that test. A second lap was measured for short length irregularity, and the third lap from each picker was carded. Judging from the lap meter records, we would conclude that laps from Picker No. 5, Mill A, were decidedly better than laps from Picker No. 3 at Mill B.

But let us carry our investigation further. Fig. 5 shows a part of the charts which recorded short length continuous variation in the second lap from the same two pickers. You will remember that the first lap from Picker No. 5, Mill A, was more even yard-to-yard than the lap from Picker No. 3, Mill B. In short length uniformity (Fig. 5) the order is reversed; the lap from Picker No. 3, Mill B is better.

The third lap from each picker was carded, and every tenth yard of card sliver was weighed. The frequency diagrams (Fig. 6) show the range and distribution of card sliver weights. Sliver from both laps ranged from 43 to about 60 grains per yard. Values on the left show what percentage of the sliver was in each weight group between these extremes. Although the frequency distributions are shaped differently, the coefficients of variation were about the same. The C.V. for Picker No. 5, Mill A, was 5.52%, and the C.V. for Picker No. 3, Mill B, was 5.75%.

Overall quality of laps from the two pickers seems to be about equal. Therefore, our job is to concentrate on the short length or within-yard variation in picker laps, without neglecting the other phases.

Factors of Picker Lap Variation. Short length irregularities in picker laps are apparently due to an entirely different set of factors from those causing yard-to-yard variations. There does not seem to be any relationship between the two.

Also, a third set of factors causes fluctuations in total lap weights. Heavy laps are neither

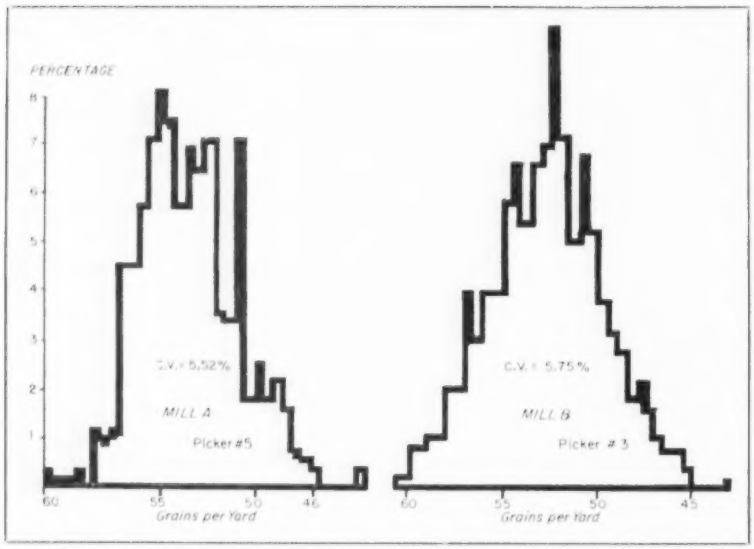


FIG. 6. CARD SLIVER WEIGHT PER YARD from laps described in Figs. 4 and 5. The frequency distributions are shaped differently, the coefficients of variation are about the same. Therefore, the overall quality of laps from Mills A and B seems to be about equal.

more nor less uniform than lighter laps from the same picker. If this is true, then each of the three sets of factors affects lap uniformity but in different ways, and each set independently contributes to card sliver weight uniformity.

In such cases the effects are combined according to geometric equation: $T^2 = a^2 + b^2 + c^2$. Here T = total C.V. in the picker laps; a = lap weights C.V.; b = lap yard-to-yard C.V.; c = short length C.V.

Instead of a written equation, the graphic analysis shown in Fig. 7 will help us get an overall picture of lap quality. As we see, total yard-to-yard variation in all laps produced is due to (1) lap weight fluctuations, usually $\pm\frac{1}{2}$ pounds from a standard, and (2) the yard-to-yard variation in each lap. In addition, there is short length irregularity within each yard. This combined with total yard-to-yard variation produces the total variation in lap stock. All of this, plus carding faults, contributes to card sliver weight per yard variation.

The size of the several squares in Fig. 7 indicates the approximate relative importance of each of the quality characteristics. We have found some interesting variations, however.

Picker Laps Compared. In Fig. 8 the same type of graphic analysis is used to illustrate the difference in lap quality from two mills. (1) Thirty to forty consecutive lap weights were recorded for every picker in both mills to measure the lap weight variation. (2) Saco-Lowell lap tests were made on two laps from each picker to measure the yard-to-yard variation. (3) One lap from each picker was tested on a lap meter

FIG. 7. GRAPHIC ANALYSIS OF LAP QUALITY and the factors that cause card sliver weight variation. Size of squares indicates relative importance. As shown, the total lap weight has less effect on variation than the yard-to-yard unevenness. The short length variation in the lap (within-yard variation) causes more unevenness than the total weight and yard-to-yard variation combined. Carding faults contribute to variation in the card sliver—but short-length variation still is the predominant factor. (Carding faults are items such as snatching, split laps, singling, lap laying, etc.)

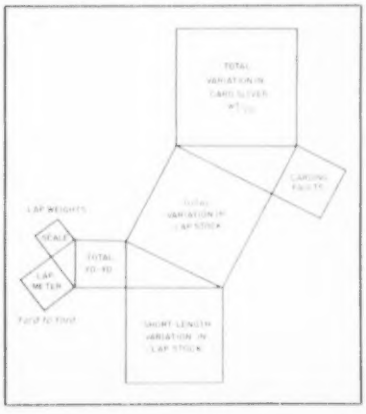
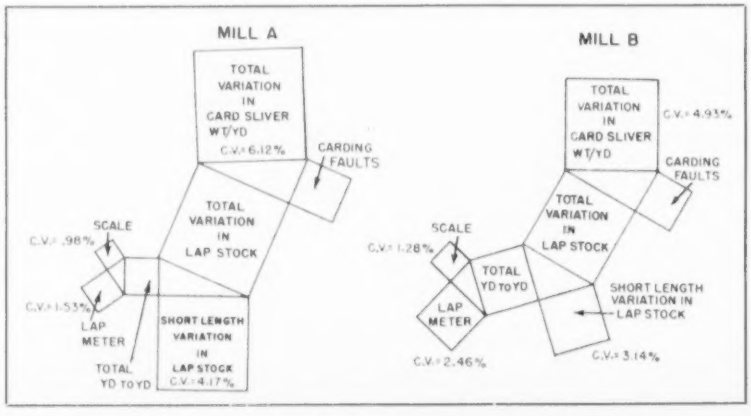


FIG. 8. LAPS FROM TWO MILLS COMPARED. This shows the relation of picker lap unevenness to card sliver weight variation. Note from the size of the squares that the picker on the right has less unevenness, or has less total variation. Then check the size of the squares which show short length variation. The picker on the left has the largest square (short length variation) and therefore produces the worse card sliver variation. Even though the total lap weight is good and the yard-to-yard variation is good, if the short length variation (within-yard variation) is bad, it produces bad card sliver weight variation.



that measures short length continuous variation. (4) Every card in each mill was sized daily for 5 days to determine the sliver weight per yard variation.

From all of these data the following equations were prepared:

Mill	Card Sliver Wt./Yd. C.V.²	=	Picker Lap Weights C.V.²	+	Saco-Lowell Yd.-to-Yd. C.V.²	+	Short Length Continuous C.V.²	+	Carding Faults C.V.²
A	$(6.12)^2$	=	$(0.975)^2$	+	$(1.53)^2$	+	$(4.17)^2$	+	X^2
	37.45	=	.95	+	2.34	+	17.39	+	16.77
B	$(4.93)^2$	=	$(1.28)^2$	+	$(2.46)^2$	+	$(3.14)^2$	+	X^2
	24.30	=	1.65	+	6.05	+	9.86	+	6.74

Note that Mill B had poor control over lap weights, and the Saco-Lowell lap charts were very bad. The redeeming quality was good short length uniformity. This more than offset the bad qualities, and the card sliver weight variation was considerably better than in Mill A.

From these analyses we must conclude that the most important factor affecting stock size is the short length variation within each yard of lap.

From these analyses research has its problem pointed out, and quality control knows what quality to concentrate its attention upon.

So far, we have confined our attention to variation lengthwise along the lap. Our studies have shown 15 to 60 per cent variation across the width of picker laps. These heavy and light streaks form a definite pattern that extends the full length of the lap. This, of course, means heavier carding where the heavy streak occurs, and as a result poorer fiber separation. We will talk about this later on. Here again is a problem for research and a quality to be inspected and controlled.

Effect of Channeling at Drawing. Six ends of sliver are usually fed to one delivery of drawing (see Fig. 9). One reason for this is to blend out unevenness in stock size. By random or chance grouping both heavy and light ends may be creeled into the same delivery producing a sliver nearer standard weight.

Ordinary mill practice, however, does not give the laws of chance a very good opportunity to work. The deck of cards, figuratively speaking, doesn't get a very good shuffle, and at times cards are dealt from the bottom of the deck. Channeling or routing stock from cards to breaker frames and from breaker to finisher is common practice. Creels are usually made up as stock becomes available, and there is no opportunity to blend out long range difference.

Once a creel is selected and drawn in, the laws of chance are placed under severe restrictions. Whether heavy, light, or standard, it will stay that way until the creel is used up. Evening of stock size irregularity is restricted to what random variation exists along the ends of sliver.

Fig. 9A attempts to show the effect of channeling and other mill practices that restrict random grouping upon stock size uniformity. Random mixing is represented by the crossed lines, indicating that all sliver goes to a central point for shuffling and regrouping.

Channeling is represented by the outside lines. The top line shows that ends of heavy sliver tend to remain together, and the bottom line shows that light ends tend to remain together. As a result, their doubling is not as effective in reducing stock size variation as it is theoretically supposed to be.

Variation Introduced at Drawing. Stock size unevenness after two processes of drawing is some-

FIG. 9. ILLUSTRATING CHANNELING OF STOCK. This procedure is common practice in mills today. Unevenness in stock size could be blended out by laws of chance, but chance doesn't have a chance when stock is channeled.

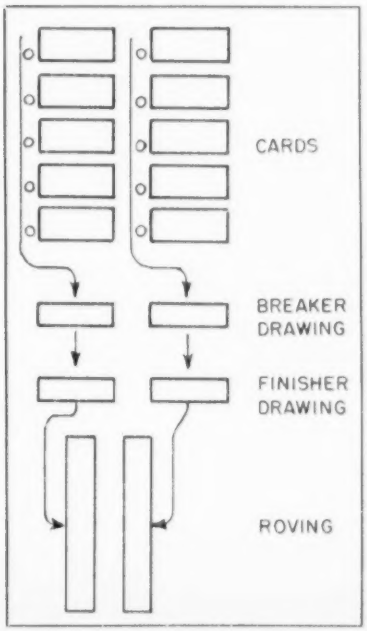
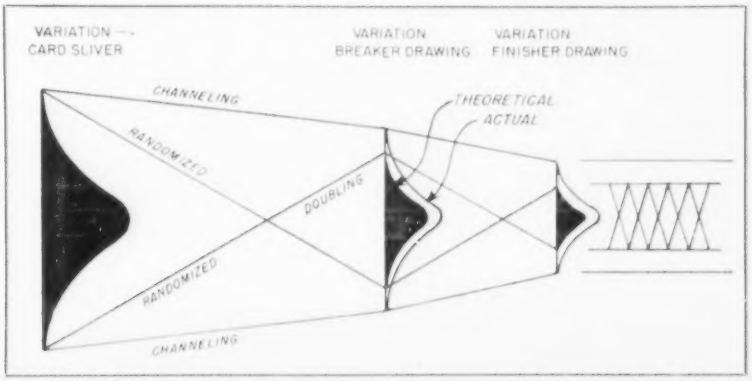


FIG. 9A. CHANNELING PARTLY NULLIFIES BENEFITS OF DOUBLING. Top outside line and bottom outside line show that heavy and light sliver remain together. Inside crossed lines indicate value of regrouping and reshuffling stock. The cones represent the frequency distribution.



time much greater than one would expect. All of the blame cannot be placed on non-random blending. Sliver weight variation can be introduced at the drawing process itself.

Frames sometime have different draft constants. One frame may consistently deliver heavy sliver because it has a low draft, and another frame may consistently deliver light sliver because it has a high draft. This happens sometime on frames of the same make and model and with the same draft gear. This is particularly true of metallic rolls, where the effective diameter varies according to flute size, and the depth the flutes of top and bottom rolls mesh into each other.

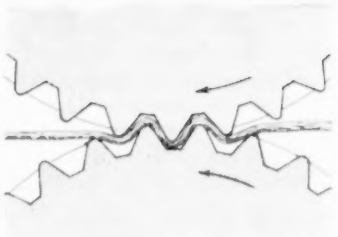


FIG. 10. STOCK IS CRIMPED as it passes through fluted drawing rolls. The effective diameter of the rolls is greater than the outside diameter. For effect of trash in drawing rolls, see Fig. 16.

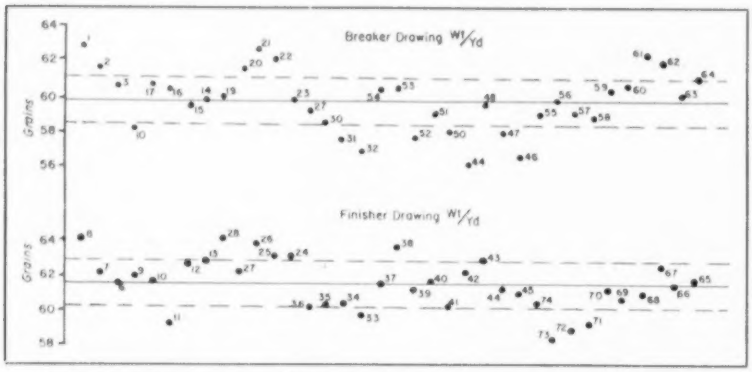


FIG. 11. DRAWING FRAMES OUT OF CONTROL. Note that usually the heavy sliver from the breaker drawing when channeled to the finisher drawing causes the finisher also to deliver heavy sliver. For other comments on channeling, see Fig. 9A.

Dots show frame averages determined by 10 yards of sliver per frame for five different days. Solid line indicates the grand average. Broken line shows tolerance limits established from actual variation or performance of individual frames.

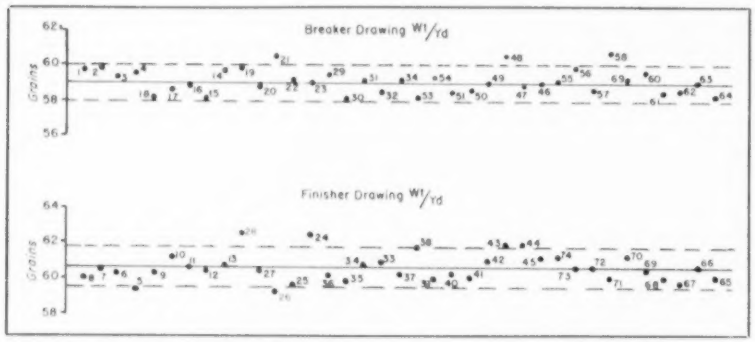


FIG. 12. DRAWING FRAMES (shown in Fig. 11) NOW IN CONTROL. Draft gears were selected for each frame to adjust it to a standard draft constant. Frames of same type may have different draft constants. For legend, see caption under Fig. 11.

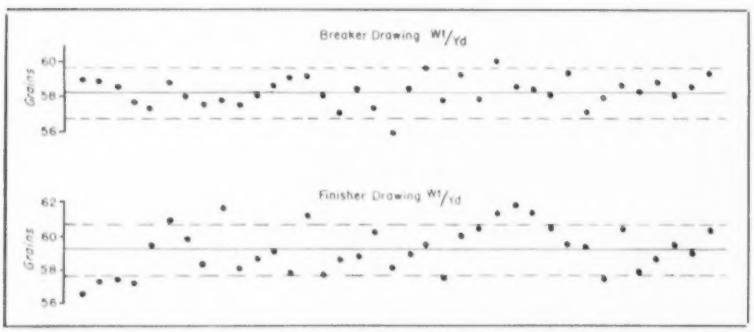


FIG 13. SAME DRAWING FRAMES (as in Figs. 11 and 12) AFTER SIX MONTHS. Most of them are still in control. Usually the out-of-control frames could be explained. For legend, see caption under Fig. 11.

The drawing in Fig. 10 shows that the stock is crimped as it passes between fluted rolls. Thus the effective circumference or effective diameter of the rolls is greater than the outside diameter. Textile handbooks state that a 1⅜" fluted roll may have an effective diameter of 2", or an increase of about 45%. Rolls on different frames vary in the depth the flutes mesh and, therefore, have different effective diameters, and consequently, different drafts.

With certain combinations of rolls, these differences may affect the draft of a frame the equivalent of two teeth in the draft gear. A situation of this kind is ideal for applying statistical quality control.

The chart (Fig. 11) shows drawing frames out of control because of frame differences. Each dot represents a frame average determined from five daily size tests. Tolerance lines on each side of the average or center line indicate the normal or expected variation in sample values. These limits were calculated from the variations between daily size tests on the same frame. A high percentage of the frames are out of control.

The dot representing each frame is placed on the chart in the same relative position that it occupied in the card room. Breaker sliver was usually channeled to the nearest finisher frame; therefore, heavy sliver from a breaker frame often caused the nearest finisher frame to deliver heavy sliver also.

Fig. 12 shows the same drawing frames after draft gears were selected for each frame to adjust it to a standard draft constant.

Fig. 13 shows the same drawing frames six months after the last previous test. Except for a few frames, the process was still fairly well under control. Usually there were satisfactory explanations for the out-of-control frames.

The data shown in Fig. 14 were obtained from another card room, but very effectively show the relationship between drawing sliver weight and actual draft. Actual effective draft of each of the breaker frames represented here was determined by creeling a known length of card sliver, and measuring the length it was drafted into.

By inverting the scale and plotting the measured draft on the same graph with the average sliver weight per yard, a very definite relationship can be observed. Note that the actual drafts range about 9%. This increases rather than improves stock size nonuniformity.

A third factor producing weight per yard variation in finisher drawing in excess of the theoretical expected variation is caused by drafting. Inch-to-inch variation in card sliver after a draft of 36 becomes yard-to-yard variation in finisher drawing (see Fig. 15). For instance, card sliver may have 12% short length range variation. 36 doublings would reduce this amount to 2%, but it would no longer be inch-to-inch variation. It would be 2% additional yard-to-yard variation.

What we have been talking about is variation in drawing sliver between one-yard lengths or longer. Another important quality character of drawing sliver is short length variation or irregularity between sections less than one yard in length. Let us look again at fluted steel rolls. Meshing of the flutes of top and bottom rolls increases their effective diameter. Any eccentricity in the bearing or rolls would vary the depth of mesh and produce a cyclic change in effective diameter and actual draft, thus producing unevenness.

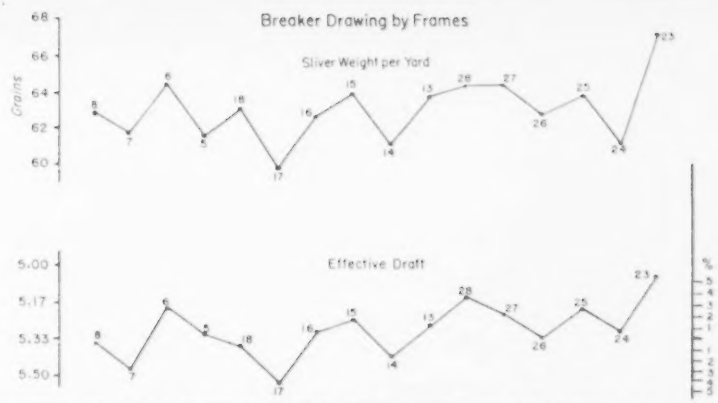


FIG. 14. RANGE OF ACTUAL OR EFFECTIVE DRAFTS is 9% in this case. Test was made by creeling known length of card sliver and measuring length it drafted into. This is a chart to show the relation of effective draft to sliver weight per yard on breaker drawing frames. When actual or effective drafts are not the same on frames, stock size nonuniformity is increased.

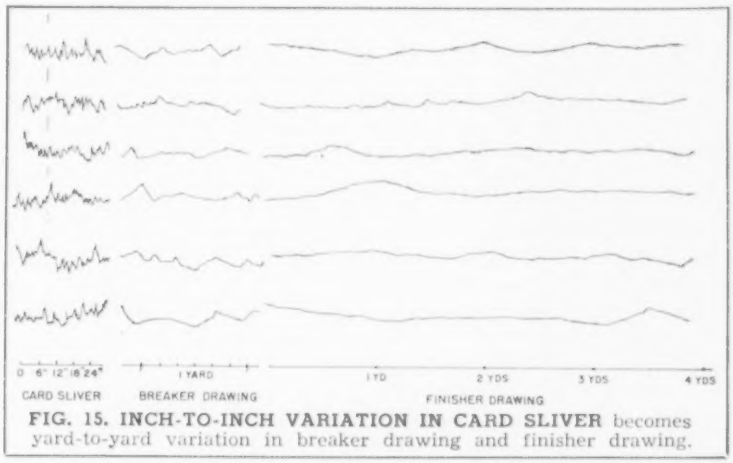
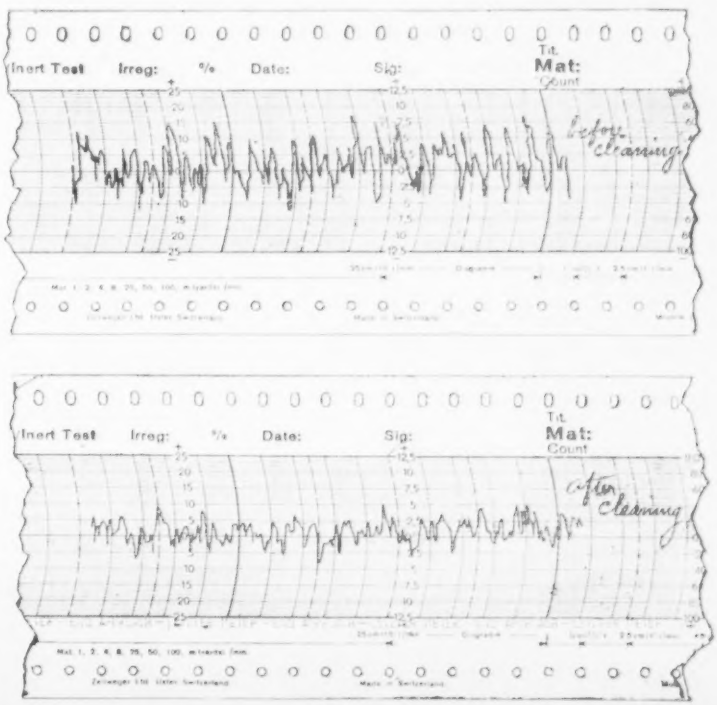


FIG. 15. INCH-TO-INCH VARIATION IN CARD SLIVER becomes yard-to-yard variation in breaker drawing and finisher drawing.

FIG. 16. EFFECT OF CLEANING ROLLS on breaker drawing evenness. Since effective draft is regulated by meshing of rolls, here can be seen the direct results of waste and foreign matter in the fluted rolls—and how the short term variation caused by foreign matter was corrected. Dirty rolls in top graph; cleaned rolls in lower graph.



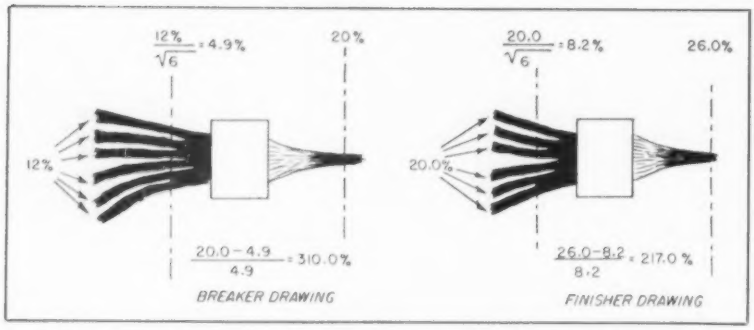


FIG. 17. UNEVENNESS DELIVERED IS GREATER THAN UNEVENNESS FED IN, or, unevenness increases with processing. This sketch illustrates the relation of short length variation in stock produced to short length variation in stock delivered.

This is an increase of 310%.

By the same arithmetic, it can be calculated that unevenness in finisher drawing is 217% greater than the unevenness it receives. Thus, there is plenty of room for improvement in fiber control. This is distinctly a problem for research and engineering development.

Variation from Fiber Arrangement. Card sliver, breaker drawing, and finisher drawing are ordinarily about the same size or weight per yard. Following these processes, the stock size is reduced to 1/6 of the original size. Thus, the number of fibers in the cross section is reduced to 1/6 of the original number. Now, if the fibers are arranged at random, the variation in number of fibers in the cross section will be increased by the square root of 6, or 2.45 times.

Drafting with Dirty and Clean Rolls. Fig. 16 shows sliver evenness charts before and after the drafting rolls on a breaker drawing frame were cleaned of dirt and lint. Waste and foreign matter regulated the meshing of the fluted rolls and caused short term variation in effective diameter and irregular drafting. These are cause factors which can be easily detected, and, therefore, come under quality control.

Importance of Fiber Control. One of the most important causes of unevenness in sliver is insufficient fiber control, the result of which are drafting waves. This is a fundamental fault of the system. It is not probable that anything near perfect fiber control will be attained by drafting rolls.

We are all acquainted with the fact that percentage unevenness usually increases with each drafting process. Some typical unevenness values for slivers are: card sliver, 12%; breaker drawing, 20%; and finisher drawing, 26%. Let us examine these figures more closely, referring to sketch in Fig. 17.

Six ends of card sliver are fed to each delivery of breaker drawing. According to the laws of doubling, the short length unevenness in each strand should partly compensate for the unevenness in the others. Therefore, the short length unevenness of the total stock fed to the back rolls is $12/\sqrt{6} = 4.9\%$. The short length unevenness of the single strand of breaker sliver delivered is 20%.

FIG. 18. EFFECT OF RANDOM FIBER ARRANGEMENT UPON SHORT LENGTH IRREGULARITY IN VARIOUS STOCKS

Stock Size	Average No. Fibers Per Cross Section	C.V.	Range Per Cent (5 C.V.)
60 grain sliver	22,500	0.67	3.4
1 hank roving	3,000	1.82	9.1
10's yarn	300	5.78	28.9
20's yarn	150	8.16	40.8
30's yarn	100	10.00	50.0

$$C.V. = \frac{100\sqrt{N}}{N}$$

C.V. = Coefficient of Variation in No. of Fibers Per c/s

N = Average Number of Fibers Per c/s

Range Per Cent is roughly 5 C.V.

(±2½ St'd. Dev. includes approximately 99% of the variation.)

Values for random unevenness given here assume that the true textile units are individual fibers: that each fiber is free to move independently of every other fiber. If two or more fibers are entangled to the extent that textile processing does not separate them, the entangled fibers are displaced as a single unit. In such a case, the best arrangement we can expect is a random arrangement of the entangled units of fibers. (The unevenness of linen is a concrete illustration of the effect of bundles of fibers upon yarn uniformity.) For the purpose of illustration, let us assume that the average number of fibers entangled as a unit is two fibers per tuft. The per cent of unevenness in roving and yarn would be increased considerably.

FIG. 19. EFFECT OF RANDOM ARRANGEMENT OF TEXTILE UNITS UPON SHORT LENGTH VARIATION IN VARIOUS STOCKS

Stock Size	No. of Units Per C/S.		C.V. %		Range Per Cent	
	Fibers	Tufts	Fibers	Tufts	Fibers	Tufts
60 grain sliver	22,500	11,250	0.67	1.00	3.4	5.0
1.00 hank roving	3,000	1,500	1.82	2.58	9.1	12.9
10's yarn	300	150	5.78	8.16	28.9	41.0
20's yarn	150	75	8.16	11.52	40.8	57.6
30's yarn	100	50	10.00	14.20	50.0	71.0

$$C.V. = \frac{100\sqrt{N}}{N}$$

C.V. = Coef. of Variation in Number of Textile Units

N = Average Number of Textile Units per c/s

Range Per Cent is roughly 5 C.V.

(±2½ St'd. Dev. includes approximately 99% of the variation.)

duced until it becomes yarn. Reducing the number of fibers per cross section introduces another factor contributing to short length unevenness.

Textile processing does not attempt to place individual fibers like a builder lays shingles on a roof. Textile processing strives to produce a random arrangement of the fiber. To a builder, this would be like tossing the shingles down and using some instrument like a rake to spread them out uniformly. This would certainly be an unsatisfactory way of roofing a house, but it is the ideal arrangement so far as the spinner is concerned.

The statistician can tell us how much variation we must expect from perfect random fiber arrangement. This does not include irregularity introduced by drafting waves and other faults of processing.

With a random arrangement of fibers, short length unevenness varies inversely with the number of fibers per cross section. The fewer the fibers, the greater the unevenness. Fig. 18 lists some average values of the random fiber arrangement on short length irregularity, and the importance of fiber separation is emphasized in Fig. 19, where two fibers are assumed to work as one (in tufts instead of as a single fiber).

This comparison (information in Figs. 18 and 19) was made to emphasize the importance of fiber separation. In discussing picker lap unevenness, this subject was deferred for later consideration. The primary purpose of carding is fiber separation. It is a well-known fact that fiber separation is affected by the rate of carding. To improve the overall separation of fibers, the rate of carding is reduced. Consider then the effect of lap unevenness upon carding quality.

Effect of Lap Quality on Carding Quality. As already mentioned, lap stock is uneven both lengthwise and crosswise. Irregularities of 1″ or shorter that occur lengthwise in the laps are evened out somewhat by carding. For instance, if the feed roll is stopped, there is a tailing-off in the card web for a number of yards.

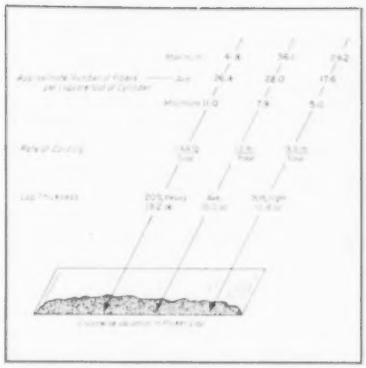


FIG. 20. HOW CROSSWISE LAP VARIATION AFFECTS FIBER SEPARATION AT CARD. If the average rate of carding is 12 lb/hr and the lap thickness is 20% heavy, the rate of carding is 14.4 lb/hr, with an average of 26.4 fibers per square foot of cylinder at that point on the cylinder; if the lap thickness is 20% light, the rate of carding is 9.6 lb/hr, with an average of 17.6 fibers per square foot of cylinder. A thick or thin place in the lap extending over two inches or more affects the weight of the card sliver 100%.

Also, when a new lap is "layed," there is usually an overlapping of lap stock for a fraction of an inch. This results in a gradual increase in weight of the sliver and then a gradual decrease back to normal. At the maximum weight, there may be a 50% increase in sliver weight.

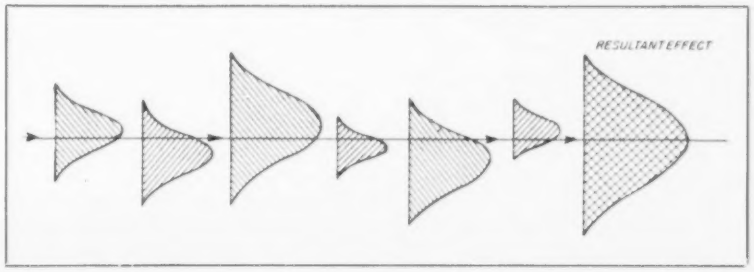
A thick or thin place in the lap extending over 2″ or more affects the weight of the card sliver 100%. These lengthwise variations in the lap vary the rate of carding and affect the quality of carding (see Fig. 20).

Crosswise variation in picker laps is not distributed across the carding cylinder or doffing cylinder. A section of lap stock 6″ wide when carded makes a web exactly 6″ wide. Therefore, wherever there is a heavy streak, that particular section of the card is overloaded, and the desired fiber separation is not attained. Lap evenness improves carding quality and fiber separation to the extent that rate of carding is less variable.

Effect of Fiber Fineness on Roving and Yarn. Another cause of unevenness in roving and yarn is differences in fiber fineness, or fiber weight per inch. Perfect random arrangement of fibers is expected to give variable numbers of fibers per yarn cross section. The same laws of chance will also give various combinations of fiber fineness. If the raw stock has been controlled for fineness, the effect upon yarn evenness will not be great. On the other hand, unrestricted mixing of fine and coarse fibered cotton may have considerable effect upon yarn evenness, especially in fine yarns.

Other Factors that Affect Quality. Some of the more important factors affecting yarn size variation and short length nonuniformity have been discussed briefly. In addition to these main factors, there are numerous small chance factors that have a permanent effect upon quality. Fig. 20A attempts to illustrate the cumulated effect of all these factors upon the resulting quality. Each of the fre-

FIG. 20A. CUMULATED EFFECT ON QUALITY. At every manufacturing process, variation in quality is the cumulated effect of numerous chance variations. Some of them are small, some large; some improve quality, some detract from it. Each cone below represents some variation, such as good or poor picking, degree of cleanliness, etc. The resulting effect is at far right.



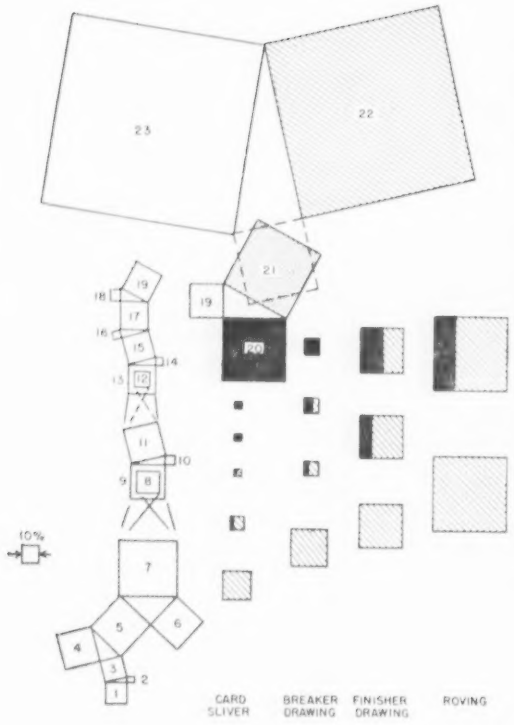


FIG. 21. Each square represents stock size variation at different processes or factors contributing to stock size variation. The size of each square is roughly proportional to the contribution that source of variation has upon yarn unevenness. Unshaded areas contribute to bobbin-to-bobbin or long length variation. Solid areas contribute to intermediate lengths or yard-to-yard variation within each bobbin. Crosshatched areas contribute to short length unevenness in yarns.

1. Lap yard-to-yard
2. Lap weights
3. 1 + 2 combined
4. → Lap short length variation
5. 1 + 2 + 3
6. → Carding faults
7. Total card sliver wt./yd. variation
8. Theoretical blended stock at breaker drawing
9. → Channeled stock at breaker frames
10. Breaker frame differences
11. Variation breaker drawing delivered
12. Theoretical blended stock at finisher frame
13. → Channeled stock at finisher frame
14. Finisher frame differences
15. Variation in wt./yd. finisher drawing delivered
16. Frame and delivery differences at fly frames
17. Roving stock size variation
18. Frame and delivery differences at spinning
19. Total long length variation in roving
20. Yard-to-yard variation in yarn resulting from the drafting out of short length variation in (a) card sliver, (b) breaker drawing, (c) finisher drawing, and (d) roving.
21. Total 19 + 20
22. Yarn short length variation
23. Total yarn variation 19 + 20 + 22

quency curves is supposed to illustrate variations in quality of work at the several processes of manufacturing.

For instance, the first curve (in Fig. 20A) may represent variations in raw stock quality. The upper tail of the curve represents the best bales of cotton included in the mix, and the lower tail of the curve represents the bales of poorest quality in the mix. The second curve may represent opening and picking.

There are differences between cleaning lines and pickers. In addition, quality of processing varies within each unit, depending upon fluctuations in rate of feeding, degree of cleanliness, and other conditions pertaining to maintenance. The upper tail of the second curve represents the best opening, cleaning, and picking that the stock receives under optimum conditions. The lower tail of the curve represents the poorest opening, cleaning, and picking the stock receives under the worst conditions.

The third curve may represent carding quality. The upper tail of the curve represents carding quality on the best cards, soon after correct grinding and proper setting and immediately after stripping and cleaning. The lower represents the poorest job of carding under the reverse condition. The upper tails of the other curves likewise represent the best deliveries of drawing, roving, and yarn, operating under the best conditions of cleanliness, maintenance, and general operating conditions.

There are thousands, possibly millions, of paths or routes a flock of raw material can take through a mill. It is very unlikely that the highest quality of fiber will follow the route represented by the upper tails of the several quality curves. It is equally unlikely that the poorest quality fiber will follow the contrasting route throughout the mill. By chance, raw stock of various qualities may literally take any one of many zigzag paths through these curves representing processing differences.

As a result, the yarns produced differ in size, evenness, strength, and appearance, depending upon the path taken. The cumulated effects of balancing the good and bad tend to make most of the yarn about average quality. But there will always be some better or worse than average.

Each process in the card room usually contributes something to stock size variation, or short length nonuniformity. Fig. 21 summarizes the various contributions and their relative importance.

Research is primarily interested in items (1), (2), (4), (16), (18), and short length variation at all processes, because they are basic sources of variation. Quality control is primarily concerned with controlling items: (1), (2), (4), (6), (9), (10), (13), (14), (16), (18), and also short length variation at each process of drafting.

Quality Control in Spinning. Most of the foregoing discussion was concerned with quality analysis of card room processes. Although the foundation for textile quality is laid in the card room, research and quality control are equally important in spinning and weaving, but those fields will be covered in another article.

Jig for Gluing Loom Brake Corks

By R. J. TUCKER, JR.
Plant Engineer
Patterson Mills Co.

EXCLUSIVE

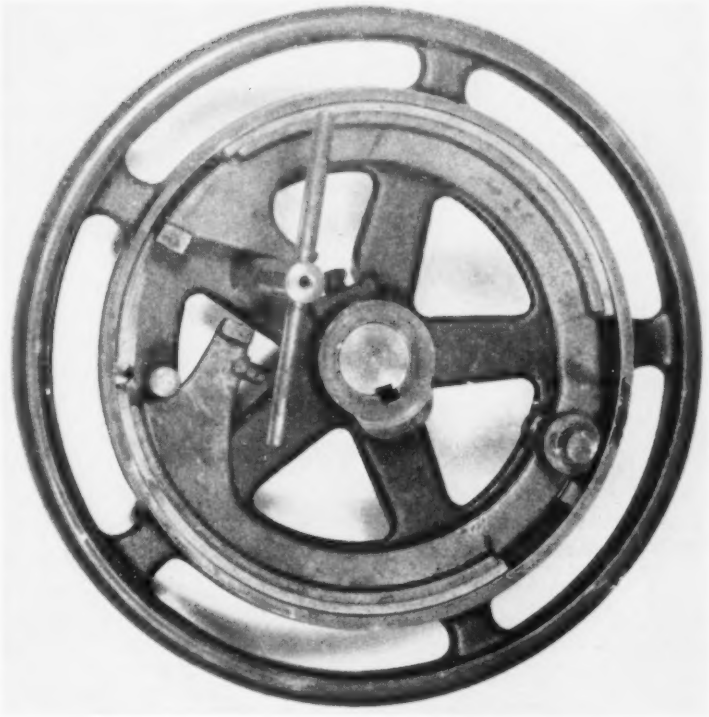
- ★ *can be easily made in mill shop*
- ★ *saves time for loom fixers*
- ★ *does not compress cork excessively*

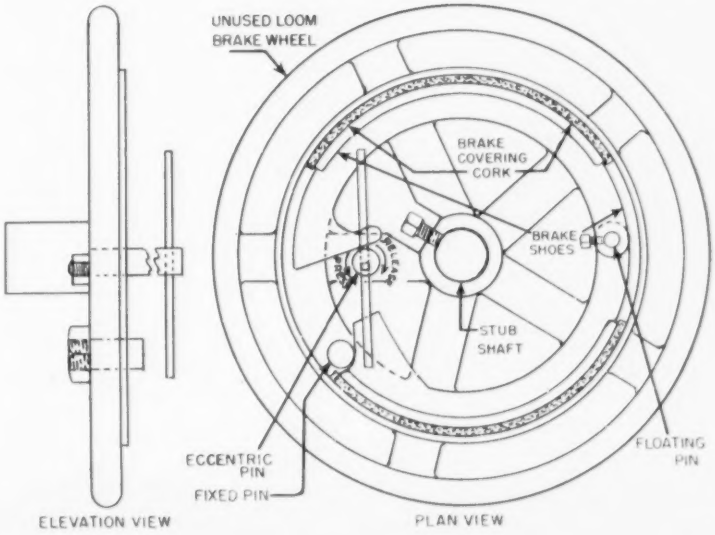
IT IS always difficult to glue materials to steel. Items such as brake corks used on looms are doubly difficult due to the curved shape of the brake shoes and the fact that the cork must not be compressed too much before use. Added to this difficulty is the fact that brake corks must be replaced frequently, thus requiring an accurate and fast method for application.

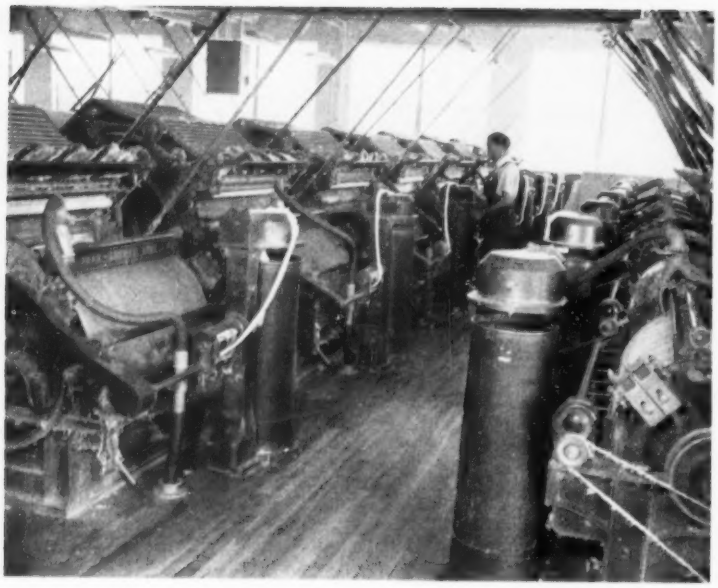
W. H. Leathers, our mill master mechanic, has devised a simple, inexpensive, easy-to-use jig for this job employing a discarded loom brake wheel. A study of the accompanying sketch will show how easily this jig works.

A short piece of shafting was placed in the hub of the old brake wheel. The short shaft provides an anchor by which the unit may be firmly held in any convenient vise. The fixed pin and floating pin were then added to hold the brake shoes in their actual operating position. An eccentric pin with a handle is then inserted to apply pressure between the brake corks and the shoes. A quick twist of the wrist after putting the corks in position applies the pressure for gluing. After the glue has set, a second quick twist of the eccentric pin releases this pressure and allows quick removal of the brake shoes.

The pressure applied by the eccentric pin is quite important. This item should be of such a size and so located as to apply enough pressure for a good glue job but not enough to compress the cork and shorten its life. Two or three of these jigs for each weave room should be most helpful in replacing brake corks rapidly and easily when desired. We have discarded all other methods in favor of this jig.







STRIPPER PIPES extend through the floor and are made of a flexible rubber composition material. The traversing nozzle and segment of hose may be easily detached to permit card grinding.

Through-Floor Stripper System

—the answer to an installation problem

Staff Prepared

EXCLUSIVE

AT Puritan Cordage Mills, Inc., Mallison Braided Cord Co. Div., Athens, Ga., a continuing program of mill expansion, improvement, and modernization to improve product quality was started several years ago. A look at the mill today shows noteworthy accomplishment.

Vacuum stripper lines extend through the floor instead of overhead on 33 cards in this mill. Overhead cleaning is thereby partially alleviated in the card room, less pipe is needed in this instance, and the air pumping system was not altered to accommodate the new installation.

Overhead trusses and structural members in the card room would not permit satisfactory overhead installation of the stripper collection pipes; therefore the pipes were extended through the floor.

The change was made upon relocating the card room in the new building which now houses the opening, picking, and carding departments. Abington equipment is employed, and flexible pipes on the cards are made of a reinforced rubber composition material. No difficulty has been experienced in grinding the cards in that the pipes may be quickly and easily disconnected and stowed preparatory to grinding.

RIGID COLLECTION PIPES are suspended close to the ceiling in the basement-level floor which houses the openers and pickers. Note cleanliness of pipes under operating conditions.

The rigid pipe lines in the collection system are suspended from

Cotton Consumption Up 3 Million Bales

(Cotton Council 1953 Convention in Dallas)

THE NORMAL domestic cotton consumption today is 3 million bales greater than during the pre-World War II period, according to Dr. M. K. Horne, Jr., chief economist of the National Cotton Council, in his address to more than a thousand members of the Council who convened January 26-27 in Dallas, Texas, for its fifteenth annual meeting. Domestic consumption in 1952 was 9.3 million bales, the level on which the industry will strive to build further net gains.

Read P. Dunn, Jr., foreign trade director, expressed the opinion that, over the long range, foreign nations offered the strongest markets for United States cotton. He stated that there is not much likelihood of any large-scale increases in cotton production outside this country in the near future. U. S. cotton's chief competitor in world markets is more likely to be synthetic fibers than foreign-grown cottons. World consumption of cotton during the past four years has averaged about five per cent over 1938 levels, while wool is about 20 per cent higher and rayon about 63 per cent, he pointed out.

In this country, after a long uphill fight, the cotton industry has achieved a great victory in halting a vast government-subsidized expansion of synthetic fibers. J. Banks Young, Washington representative of the Council, told the group that during 1952 government planners pressed for an immediate expansion of about a billion pounds of synthetic fibers, equivalent to over two million bales of cotton annually. Demands of the synthetic industry for favorable action on their requests for government hand-outs became more forceful. Top mobilization officials were warned, however, that Congress would not allow indiscriminate granting of tax benefits for unneeded synthetic fiber expansion, and as a result, barring unforeseen shortages of natural fibers or a sudden change in the world situation, no further government aid will be given the synthetic industry.

As President Harold A. Young pointed out, "This problem of tougher competition is a good old American problem. It is the kind of problem for which we were founded, the kind of problem we like, the kind of problem we are qualified to lick if we face it clearly and move right into it." Expansion of long-time cotton promotion activities was urged by Mr. Young, who advocated that all possible help be given cotton people abroad who are trying to build up their own programs of research and promotion to increase cotton consumption; also, that a stronger program be developed to acquaint foreign buyers with the story of quality improvement in U. S. cotton.

Sales Campaigns. A number of sales campaigns are in full swing to promote cotton goods sales. National Cotton Week, May 11-16, will be based on the theme "Pick Cotton—Look Smart, Be Cool, and Feel Fresh." The attention of the nation will be focused on the fundamental role of cotton in peace and war, and the fact that as a strategic war material, it is so important that it ranks second only to steel.

The sales campaign is stressing the value of office and factory employees' cleanliness to their employers. "Go Wash Your Face," is the theme that calls attention to the benefits gained when operatives can wash their faces during the day, and have cotton towels to use.

"For Refreshing Sleep, change your sheets twice a week," is a slogan to increase consumption of sheets and pillowcases; and to induce homemakers to change sheets more frequently, the campaign has introduced a simplified method of bedmaking which can be done in about one-third the normal time. Concentrated advertising and promotional efforts this year are expected to increase sales of cotton bags and further stimulate the popularity of bag materials for home sewing.

Research. In the research field, George S. Buck, Jr., technical service director of the Council, observed that because synthetic fibers were born in chemical laboratories, it has been assumed that they enjoy enormous advantages in research. Investigation has shown, however, that cotton's strength and chemical stability give it a wider range of scientific opportunities than synthetics in many textile processes. The chemical industry, the finishing industry, and cotton mills have a common interest in developing new and specialized properties in cotton, through chemistry, Mr. Buck declared. The Cotton Research Clinic has become established as the industry's principal forum for the exchange of ideas and knowledge on problems of cotton processing and fiber properties. Leonard Smith, utilization research director, said that the Clinic idea has proved its worth, with the results of research paying off at mills.

---

the ceiling in the basement-level floor, and from here they extend through the wall and out to the waste house. Line shafts and belt drives in the card room preclude convenient and safe cleaning of ceilings which would be congested if the collection pipes were suspended over the cards. The collection pipes are closer to the ceiling of the basement-level department, and they do not interfere with other equipment or in any way adversely affect operations in the opener and picker room.

We must develop a strong and stable America as the

Price of Survival in a

By A. LEE M. WIGGINS
Chairman, Atlantic Coast Line Railroad Co.

SHORTLY after President Eisenhower returned from Korea, a taxi driver in New York assured me with apparent satisfaction that everything was going to work out all right. Many observers agree that following the election there was a remarkable change in public attitude toward our domestic and international difficulties, and a greater confidence that our problems were on the way to being solved.

Public support of a new approach to our problems, national and international, under new leadership, was a most heartening development of the recent election. New hopes were raised and faith strengthened that we will be able to preserve and multiply freedom in a world that is threatened by enslavement and human degradation, without the catastrophe of an atomic war.

However, any complacency about present conditions and the prospects ahead constitute a most dangerous attitude for the future well being and safety of this nation and for the preservation of freedom among men. The facts are that the further along we get in the struggle between freedom and communism, the more difficult becomes the task of preventing the spread of communism and the further away the time schedule for effective results reaches into the future. In the meantime, the possibility of an all-out war, starting accidentally in one of the many powder kegs around the world or by design of the communists, is a continuing and ever present threat.

An Easy Way. For the past two decades, we have sought the easy way out of our national difficulties. We have tried to find pleasant and comfortable answers to our problems through the use of government deficits, artificial price raising, legislative wage raising, the multiplication of dollars, the redistribution of wealth through taxation and inflation, government guarantees and subsidies, easy money policies that encouraged the creation of debt, and many other substitutes for sacrifice and hard work.

Most of these things were done in the name of social progress and reform. It was a pleasant one way street. We were headed toward what appeared to be Utopia when World War II brought the threat of fascist domination of the free world.

Tragic Mistakes. We mobilized our resources and leadership and attempted to purge the world of the virus of facism which we thought at the time was the only serious threat to freedom. In this we were tragically mistaken. We were led to extend a friendly hand to a war ally who has now become a greater enemy to freedom than Germany ever was. This former ally has now embarked on a program to conquer and enslave the entire world by means of aggression and subversion.

The tragedy is that some of the spread of communism should have been accelerated on the wings of what was considered liberalism. Subversive elements were found in high places in our own government, hiding under the protective cloak of pseudo-liberalism and social reform. Even men of sincere good will were completely deceived.

Leaders in America and throughout the world could not believe the ghostly spectre of what they feared. Appeasement and compromise seemed at the time to be the only policies that would avoid a conflict which might engulf civilization. We were literally taken for a ride — leaders of state and common citizens alike — in this country and throughout the world.

The free nations liquidated the greatest military machine on earth at the end of World War II, while communist nations multiplied their military power. Too late we discovered that the military might of communist aggression, augmented by subversion, threatened the world. Too late we discovered that there is no compromise between freedom and slavery,

REPRINTS up to five, free. Larger quantities at cost. W. R. C. Smith Publishing Co., 806 Peachtree St., N. E., Atlanta 5, Ga.

Danger-Filled World

No. 4 of a series on problems of business and government

between truth and lies, between God and materialism.

And so, today, we find this nation in the role of leadership, desperately seeking to multiply the strength of free peoples throughout the world in order to save as much as possible of what is left from the communists and to meet successfully what may be civilization's greatest struggle to preserve freedom.

World-Wide Revolution. Only now are we beginning to discover the full import of the social, political, and economic revolution that has erupted with increasing fury throughout the world. We are witnessing bitter struggles among fiercely antagonistic groups in many nations, millions of people in revolt, seeking a new and better way of life. World-wide communication, particularly radio, continuously reveals to the most isolated communities throughout the world achievements and satisfactions that inspire people everywhere to a new hope for a better life. Mankind is on the march — destiny unknown.

The disillusioned peoples of many nations are ripe for the painted allurement of communism. Discontent with low economic and social status and racial prejudices provide the ferment in which communism flourishes. Governments based on oppression and poverty for the multitudes and power and privilege for the few are disintegrating throughout the world.

A More Positive Approach. Our first objective was to prevent the further absorption of peoples and nations by the communists. It found expression in military action in Korea. For the most part, it is being carried out through a program of economic and military aid to countries that have demonstrated a desire and capacity to fight communism. Though successful in large measure, this policy has failed in some coun-

Mr. WIGGINS, one of the South's most successful business executives, has had a notable career also as a banker and a newspaper publisher. Here are just a few of his many and varied business connections: chairman of the board, Atlantic Coast Line, Louisville and Nashville, and affiliated railroad companies; president and chairman, Atlantic Coast Line Co.; president, Trust Company of South Carolina; president, Hartsville (S. C.) Publishing Co.; director, American Telephone & Telegraph Co. He is a past president of the American Bankers Association, Southern Retail Merchants Conference, South Carolina Press Association, and many similar organizations. He has served as treasurer of the American National Red Cross, member of the Federal Reserve System's Advisory Council, and Under Secretary of the U. S. Treasury.

tries because of our ineptness and a question as to our motives.

Whatever the success or failure of these initial efforts, we should re-examine and re-appraise them. We should now move to a more positive approach in which our efforts will be attuned to the aspirations and needs of particular countries. Our motives should be clearly revealed as being primarily to help people who want to preserve the freedom they have and are trying to achieve a more productive and more satisfying social, economic, and political order under freedom.

Another objective has been to further mobilize and multiply the military and economic strength of free peoples so as to prevent the communists from over-running other parts of Europe and Asia as well as to form the base on which military success can be achieved if the communists resort to war. Here again our approach should become more positive, our objectives clearer, and our motives defined in terms of preserving freedom and multiplying the opportunities for a better life for the peoples of cooperating nations.

Our task is to convince the rest of the world that our motives are to promote freedom for all as well as to preserve it for ourselves. Until now, our objectives and methods have been largely of an emergency nature. We have adopted temporary expedients. We now face the tragic necessity of living dangerously in a danger-filled world for the foreseeable future. The greatest peril of all would be a complacent feeling that the situation will work out all right. We need to sustain courage of a high order in the presence of uncertainty as to the plans of the Kremlin.

We would like to find an easy and comfortable way out of this threat to our way of life and to the society of free men. We would like to pull the cover up over our eyes and blot out the ghastly prospect; but it is there, a reality and not a bloody nightmare.

Harsh Realities. Three unpleasant realities confront us: (1) that the communists have brought under their domination and control a large part of the world and are now attempting the conquest of the entire world; (2) that this country is cast in the role of world leadership, the exercise of which may determine whether an all-out military war may be prevented or, if it comes, may be won; and (3) that the clash and struggle of freedom versus communism will go on and on for the indefinite future.

Recognizing the necessity for making long-range plans in the exercise of this leadership, part of our present task is to evaluate our own internal strength and weakness and prepare for the long pull. We should recognize that a large part of the financial and economic burden of this conflict has fallen on the United States and that the health of our economy has a profound effect throughout the world.

The success or failure of governments in many countries to remain free from communist domination will depend not only on our direct help but in some measure upon the financial stability of this country and our avoidance of inflation or deflation. World progress and stability at the present time are more closely tied to the integrity of the American dollar than ever before.

Areas of Weakness. Evidences of financial and economic strength in this nation are well recognized, but our weaknesses have been obscured by the rapid developments of the past two decades. There are several areas of economic weakness, actual or potential, that have developed in recent years which require examination and evaluation and where positive national policy and action are needed. Attention is directed to five of these areas:

(1) Inflation-Deflation. In certain segments of the economy, inflation since 1940 has confiscated a substantial part of our wealth. During this period, the cost per unit of production has increased nearly 100%, while the physical volume of goods and services has increased only two-thirds as much. A dollar at the present time will buy only what 53¢ of the same dollar would have bought in 1940. The full impact of the destruction of part of our dollar wealth by inflation is yet to be felt in our economy.

While some increase in the dollar supply has been necessary to serve increased production, the excessive increase has resulted in the wasting away of nearly half of the value of the dollar within a twelve-year period. However, any precipitate decline from the present plateau of prices and wages through deflation would be disastrous. On the other hand, further inflation would be explosive.

We are caught at a point where reasonable stability with a minimum movement either way appears to be the only hope of avoiding disaster. Whether we have the capacity, as well as the political and moral courage, to steer the economy on a reasonably even keel between inflation and deflation becomes the number one question in domestic as well as in world economic affairs. Required are sound fiscal and tax policies, proper monetary and credit control, and judicious management of the public debt, all backed by a determined administrative and legislative policy of government.

(2) Controlling the Budget. We find ourselves with a government debt unparalleled in amount and proportions and a federal budget around the $80 billion level and not balanced with revenue. Taxes of all kinds absorb some 30% of total national income. We appear to be stretching to the limit the capacity of our economy to service government. We have been able to withstand this burden in part through the confiscation of part of our dollar wealth and through eating up some of the "fat" previously accumulated.

Further government expenditures are projected near the current rate. How long and to what extent our domestic economy can stand such a drain without producing dangerous cracks remains to be seen. We can avoid this danger by bringing the budget down to manageable proportions and at the same time meeting defense needs and maintaining a stable economy. Such a program is believed by competent students to be possible if vigorously pursued by leaders in government and properly supported by the public.

Dynel Dyeing Costs Cut By Improved Formulations

Reduction of as much as 59 per cent in the cost of dyeing dynel has been achieved through new dye formulations in tests carried out by the Textile Fibers Department of Carbide and Carbon Chemicals Company.

The new dye formulations are equal to the old color fastness and depth of shades achieved, if not better, according to cotton wash and Fade-Ometer tests, T. A. Field, Jr., head of Carbide's development service laboratory said. Improvements by reformulation were obtained primarily in acetate and acetate-acid color dyeings, and are the results of a program devoted to the more effective utilization of the newer dyestuffs and methods of application, he added.

The figures given cover costs of dyes and assistants only and do not include scouring or finishing agents. While "substantial savings" can be made by replacing certain expensive but customarily used dyes and chemicals with others, dyers are warned to note that in some cases the less expensive dyes may require closer control in dissolving.

(3) Threats to Corporations. Part of the accumulated "fat" of our economy is being consumed through a capital levy on our productive machine, a combined product of inflation and the tax structure. Depreciation charges on productive plant and equipment provide only one-third to one-half of the reserves required to replace such facilities. The remaining part of the cost of such replacement constitutes, under our tax laws, a capital levy. Such replacement must be provided by new capital or borrowed dollars or out of earned net income.

Net income in the case of corporations is income that is left after paying federal income taxes of 52% to 82%. Many corporations that show a net income after taxes would show little, if any, net income if the full dollar replacement costs of depreciation of plant and equipment were charged as an expense. In addition, this unrealistic and inflated net income of corporations after taxes becomes subject to a graduated income tax when distributed to individual share owners.

The net result is that share owners in many corporations receive little, if any, economic net gain from their investments in common stocks. The incentive to corporate share ownership is becoming weaker, and, in time, the corporate form of enterprise will begin to disintegrate unless there are changes in our tax laws. The corporate form of business is the foundation of the private enterprise system. The alternative is nationalization.

(4) Social-Economic Programs. Within the past two decades, this country has embarked on many programs with social-economic objectives, the full impact of which cannot be measured as yet. Some of these programs are socially desirable and represent human progress. Others fit into the pattern of state socialism.

Subsidies and payments by government under some of the programs have no sound economic basis and represent a financial drain on the taxpayer without a compensatory public benefit.

As illustration: a large part of the billions of dollars of tax money that has been spent in the name of improved waterways and the development of electric energy represents a perversion of sound economic theory for the benefit of favored groups and to the hurt of others.

The increasing heavy drain on the federal treasury from social-economic outlays at a time when budgetary needs strain the financial capacity of government requires a re-examination and re-evaluation of them in terms of costs to the taxpayer as compared with resulting public benefits. Political courage of a high order will be required to reduce or discontinue many of these programs. Some of them are political dynamite.

(5) Industrial Warfare. As we strive to find answers in our quest for world peace, we should also attempt to discover a substitute for labor-management wars that imperil the national welfare. A strike or lockout is a form of economic war. Use of force to resolve economic issues seldom yields a fair and just result. As labor-management relations in this country reach maturity, there will come a measure of our capacity and intelligence to find in reason and justice a substitute for economic warfare.

The giants on both sides in such contests have at their mercy the welfare of the American people and sooner or later will come a test in which the rights of all of the people must be recognized as supreme over the rights and power of any economic group. Economic warfare can destroy the foundations of the private enterprise system and democratic government. Ways of peace must be found to replace the losses and hardships of industrial warfare.

Conclusions. I would say, in conclusion, that the hour for temporary expediency in our national life has passed. We should now look beyond the horizon. Our peril is great and danger may be nearer and greater than we think. We must develop our full strength, military and economic and also moral and spiritual. We should gird ourselves not only with military might but with the courage to act on the basis of moral convictions that spring from spiritual resources. We should promptly eliminate any serious weaknesses in our national life, actual or potential.

Our new President brought a timely challenge to American leadership when he said shortly before Christmas 1952: "It is my conviction that the great struggle of our times is one of spirit. It is a struggle for the hearts and souls of man . . . it is a contest for the beliefs, the convictions, the very innermost soul of the human being."

Want to Prevent Excessive Needle

Then consider for a few moments these observations of a circular knitting mill superintendent.

By ERNEST BRIDGES
EXCLUSIVE

KNITTING needles are one of the expensive items necessary to get production on any knitting machine; consequently needles should not be overlooked in the search to keep production costs down. These little essentials come in numerous kinds and types made to suit a large variety of hosiery, ribber, and underwear machines. The range is roughly from 12 gauge to 90 gauge for hosiery machines, and a similar variety is made for ribbers and underwear machines.

The initial cost of knitting needles is based on the price per thousand, and whether you buy 1,000 or 50,000, the cost remains the same per needle. Actually there are two costs related to needles; one is initial cost, and the other is usage cost. Any knitting mill can determine the initial cost of needles per dozen or per pound of goods produced annually; however, the usage cost will depend entirely on whether needles are used or abused.

The needles must be "worn out" to get the full value from the needles in any type of circular machine. If the needles are fully worn, the usage cost is nothing, or at most negligible. The complicated machines of today make it almost impossible to obtain maximum wear life of needles. On some types of machines 75% or more of the needles which must be replaced are destroyed by mechanical failure of machines and carelessness by machine fixers and operators. Much of the latter is not intentional but it does help to increase usage cost. Whether needles are used or abused is up to the fixers and operators.

If one fixer and his operators use 100 needles per week for a given number of dozens produced, and another fixer and his operators on the same kind of goods use 200 needles per week, the extra usage cost bears observation promptly. Each knitting crew may have alternately good and bad days and weeks, but when the margin between certain crews is consistently too much, there is definite reason for it, and the reason should be found.

Lubrication practices, temperature, yarns, stop motions, overhauling practices, and dozens of other items have direct or indirect bearing on needle consumption and usage cost. For example, improperly set latch rings can wear the hooks off of needles on some types of machines. Improperly set yarn carriers on ribbers and underwear machines may quickly ruin a complete set of both cylinder and dial needles. These things can happen, and they do happen. One turn of the crank handle at the wrong time may mean the difference between one needle or 25 needles being used on some machines.

One careless operator who forgets to watch yarns causing machines to press off may be responsible for excessive needle consumption and keep a set of machines torn up—I have seen it done. Likewise, one apprentice or fixer with little experience, and who uses brawn instead of brain on the crank handle, can damage both needles and equipment unnecessarily. I have found that most machine fixers are conscientious and willing to investigate the causes of machine malfunction.

When a machine has damaged a lot of needles, and the cause is known, watch carefully when the machine is started again. Check every possible point where needles come into contact with latch rings and latch guards. The slightest rough or damaged place may have been made by a loose or broken cam, load-up caused by bad yarn,

Sound Waves May Speed Fabric Dyeing

"Sonochemistry," the science that deals with chemical effects of sound waves, promises to speed the dyeing of fabrics and to enable researchers to transform water quickly into peroxide bleaching solution or to change cleaning fluid into chlorine gas, Dr. Ernest B. Yeager, technical director of the Ultrasonic Research Laboratory in Wayne University told the American Chemical Society's Cincinnati Section recently.

"These sound waves, known as ultrasonic waves, can be used to produce both physical and chemical changes in various materials," Dr. Yeager explained. Examples: formation of hydrogen peroxide from water containing dissolved oxygen gas; formation of chlorine gas from carbon tetrachloride; modification of chemical properties of plastics.

Costs?

machine out of time, improper drum racking, or any one of a dozen ordinary troubles. After the mess has been cleaned up, watch for needles being damaged by something that was not there before the wreck occurred.

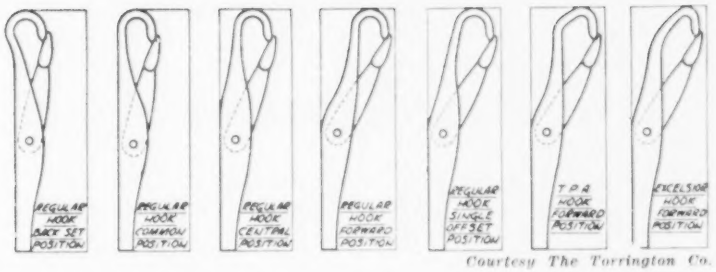
It is important to keep accurate weekly records of needles used by individual machine fixers. Be sure to tell the best man about his good record as readily as you tell the poorest man about his.

Types of Needles. Today, needles may be divided into three distinct categories: wire butt, commonly used in cylinders and dials on ribbers and underwear machines; solid butt, used on Banner, Scott & Williams B-3, B-5, Model K, and Standard hosiery machines; and double-end needles used on Scott & Williams Komet machines. There are also special needles such as solid butt saw tooth, cast offs and hooks used in dials on H-H and R-I machines, and especially designed dial needles used to produce 1 x 1 tops on plain hosiery machines. Then too, there are normal solid butt line forward hooks, central hooks, back hooks, and many others. Each needle is made to fill a definite need for certain types of machines. Although there are many different kinds of needles, there are relatively few needle makers.

Mixing Needles. Good knitting needles may be purchased from more than one source of supply. No thoughtful person would mix different oils, dyestuffs, or yarns, but many mills attempt to mix needles from different makers and put them into one machine. Such a practice is costly and unfair to each needle maker.

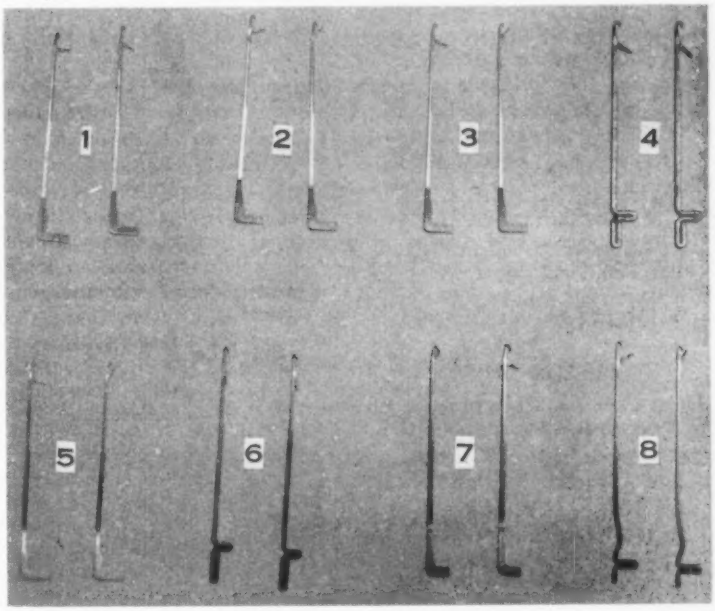
Although some salesman may say that his company's product is equal to another brand you are using, or that his needles are duplicates of the ones you are using, different makes of needles cannot be mixed in the same machine without having attendant repercussions.

Knitting machines have become more complicated in the past few years, tolerance on needles mean more than ever before, and if needles are mixed, trouble is invited, because tolerances are not the same among different brands.

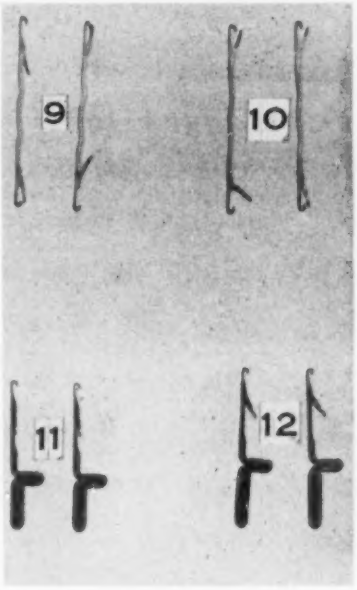

REGULAR HOOK BACK SET POSITION
REGULAR HOOK COMMON POSITION
REGULAR HOOK CENTRAL POSITION
REGULAR HOOK FORWARD POSITION
REGULAR HOOK SINGLE OFFSET POSITION
T.P.A. HOOK FORWARD POSITION
EXCELSIOR HOOK FORWARD POSITION

Courtesy The Torrington Co.

LATCH NEEDLES are available in numerous styles, shapes, and sizes. Here are several of the more common types of hooks used.



SAMPLE NEEDLES: (1) 48 gauge seamless needles, (2) 48 gauge seamless needles made by a different manufacturer, (3) TPA hook needles, (4) 18 gauge ribber needles, (5) 70 gauge solid-butt seamless needles, (6) 36 gauge wire-butt cylinder needles for ribbers, (7) 18 gauge seamless needles, (8) cuff machine needles, (9) 48 gauge Komet needles made in Germany—these won't mix with domestic needles, (10) 48 gauge domestic needles for Komets, (11) 42 gauge dial needles for ribbers, (12) 42 gauge dial needles for ribbers—made by another needle manufacturer.



SlasherTender Can See If Speed

Staff Prepared

EXCLUSIVE

Instrument indicates proper slasher speed to give desired warp moisture content. Now used successfully in slashing denim at Cone Mills.

ABOUT TWO YEARS AGO, R. L. Yates, head of Cone Research Department, recognized a need for a simple electronic instrument which would indicate slasher speed on the basis of moisture content of the warp at delivery. What was needed, according to the mill management, was a reasonably priced indicating instrument which would guide a slasher operator by showing, simply and clearly, whether the warp coming from the dry cans was too wet, too dry, or just right. Charles Strandberg of Strandberg Engineering Laboratories was called in to help Mr. Yates develop such an instrument. The indicators now in use at Cone's White Oak Plant were first installed about a year ago.

In designing the face of the instrument, three positions were used: "Fast," "Slow," and "Normal." To permit a selection of any desired moisture content as normal, an adjustment was provided on the rear of the cabinet which can be set to the per cent moisture desired and need not be changed unless it is decided to use another standard.

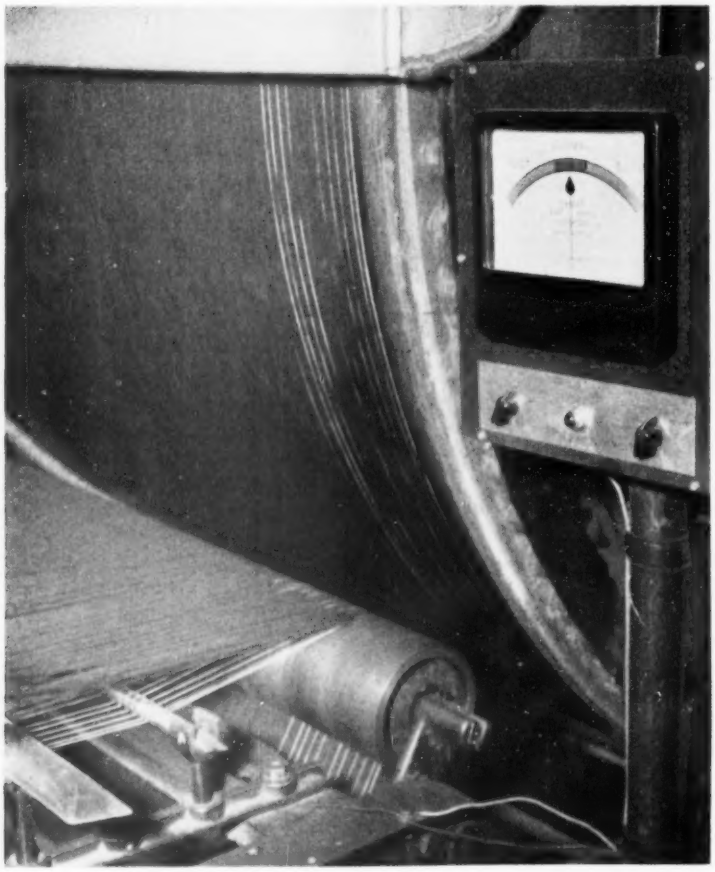
As set up in the White Oak Plant, 7½% is specified as normal moisture content for denim warp. The "Normal" range on the indicator permits a tolerance of ½%—that is, up to 8% and down to 7% before the pointer moves to "Slow" or "Fast."

If, for any reason, the yarn should come from the drying cylinders too wet, the pointer immediately swings to "Fast," indicating that the slasher is running at too great a speed for proper drying. Similarly, if the yarn comes off too dry, the pointer swings to "Slow." The dial is large and brightly colored, and any slasher running off from normal can be spotted from a considerable distance. The operator can immediately make the required adjustment in speed.

The method has proved satisfactory on slashers with cone pulleys, variable pitch pulleys, and multi-motor drives, all of which are used at White Oak. Regardless of the type of drive, the operator merely makes the required adjustment to bring the speed of the slasher to a level at which the indicating instrument reads in the "Normal" range.

In developing the instrument Strandberg Engineering Laboratories, who are now manufacturing the instruments on a commercial scale in Greensboro, N. C., eliminated many of the usual mill ob-

"NORMAL" range on the indicator permits a tolerance up to 8% and down to 7% before the pointer moves to "Slow" or "Fast." 7½% is specified as normal moisture content for denim warps at Cone.



Is Right

jections to industrial electronic equipment.

Maintenance. Simplicity and ease of maintenance were their first objectives, and they have been accomplished. The instrument uses but three small vacuum tubes of the type used in a radio. Two transformers and the tubes are all that are exposed when the back cover of the instrument is removed, and as a result, maintenance is simple and rarely required. Any radio repairman would recognize the circuits and could make practically any required repairs. Tubes which should last for at least three years at the low level at which they operate can be replaced by anyone, and other maintenance should be required even less frequently.

Accuracy. To assure accuracy, there is a check dial on the front of the instrument to be used to demonstrate that it is functioning properly and is in calibration. This dial is turned to "Operate" when the instrument is in use. To check its calibration, the dial is turned first to "Normal Check," and the pointer on the face will move to the center of the "Normal" range. Then the dial is turned to "Fast Check," and the pointer moves to the end of the "Fast" scale. Moving the dial to "Slow Check" will run the pointer to the end of the "Slow" range on the face.

If the instrument is out of calibration or not working properly, the pointer will not move to the proper point on the scale, and it is recalibrated by screw-driver adjustment at the rest. Recalibration is rarely required, according to Cone's maintenance department.

Operation. The operation of the Speed Range Indicator depends on the degree of conductance between a roller above the warp ends and a grounded roll beneath them, similar to other moisture measuring instruments, but these indicators make use of a long roll which runs completely across all warp ends from selvage to selvage. This gives a reading indicative of moisture content completely across the warp, as opposed to a few inches in the center. This design is advantageous in that it shows when an end tangles or wraps on a cylinder, thereby preventing the drying of the yarn running over it. Even a few wet ends will be indicated by a quick jump of the pointer to the "Fast" side of the scale. The movement will warn the operator that something is wrong, and he can stop the slasher and correct the trouble.

Other Applications. Cone Mills has also installed these instruments on compressive shrinkage ranges and has found them valuable aids to maintenance of constant moisture content in the cloth. They also think they may be useful in many other operations in wet processing, to indicate not only moisture content, but the degree of caustic or acid concentration in yarn or cloth processed.

Standards for Institutional Textiles

American Standards Association has been requested by conferees of national organizations to initiate a project for developing standards for the performance of textile fabrics used by hotels, hospitals, and other institutions. Hotels buy nearly 14 million towels and six million sheets annually. Use by manufacturers of standards developed would be entirely voluntary, but they would be given wide publicity and distribution; also the Hotel Association indicated that it would recommend use of the standards to its 6,000 member hotels.

Business Outlook Good, Survey Shows

To assist business in maintaining high productivity and employment once present defense goals are met, the Department of Commerce has made public the report "Markets After the Defense Expansion."*

The facts presented by this report would indicate that the business situation is still sound, said Charles Sawyer who was Secretary of Commerce when the document was made public. It shows that even with the decline in defense expenditures indicated for 1955, our economy should be able to take care of itself with planning and initiative from business, Mr. Sawyer said.

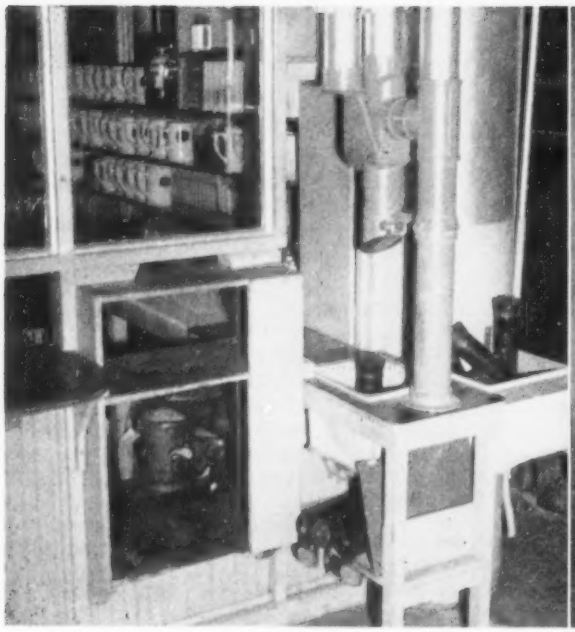
Among the highlights in the report:

1. Two surveys which show that capital investment plans of American industry for the next three years are much higher than most of us had anticipated. A 2,000-firm survey showed 1953 investment programs at $26.3 billion, only slightly below 1952's $26.9 billion. A second survey of 84 large firms covering one-third of American business investments showed that even for 1954 and 1955 these leading companies are budgeting capital investment at 85 and 80 per cent respectively of the 1952 volume.

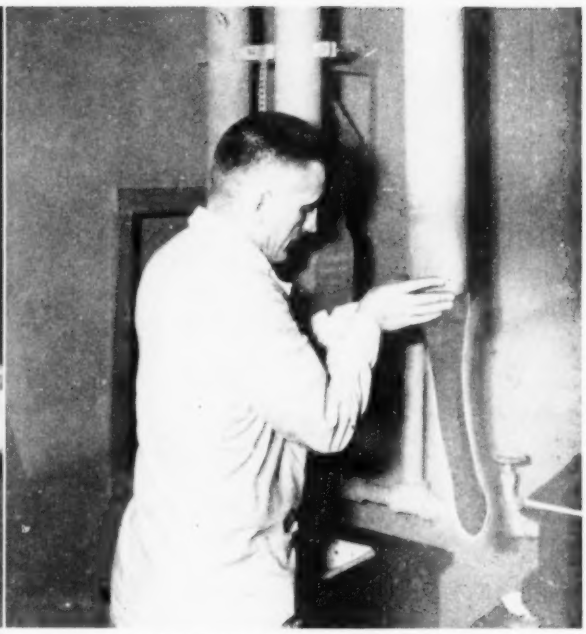
2. On the basis of several major assumptions — available labor force and productivity, the level of defense expenditures, the continuation of present tax rates, and no more than minor business fluctuations — the report suggests a potential gross national product in 1955 of $365 billion in terms of 1951 prices. This would be an increase of 8% over 1952. Should this gross national product be realized, disposable personal income in 1955 would be $240 billion, an increase of 7% over 1951.

3. Defense spending seems likely to rise to a rate of $55 to $60 billion in 1953 and 1954. If present military goals are maintained, a reduction in defense spending will be seen in 1955 to between $50 and $55 billion.

*Copies may be purchased at 60 cents per copy through U. S. Department of Commerce field office and from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.



DRUG ROOM TERMINUS of pneumatic conveyor. Here, dyer sends sample to color matching section, picks up additions for dyebath.



COLOR MATCHING TERMINUS. In this photo, Victor Schutz, matcher, conditions sample to room temperature before comparing.

Save Steps When Matching Colors

Department-store-type pneumatic dispatcher system conveys samples between drug room and laboratory.

Staff Prepared

EXCLUSIVE

COLOR MATCHING is vital to the dyeing operation; there is no way to bypass it, but there is a way to save steps. So reasoned A. J. Olson, chief dyer, hosiery finishing plant of Phoenix Hosiery Company, Milwaukee, Wis.

Here is the situation Mr. Olson was confronted with, and how he saved steps. At Phoenix, the drug room is centrally located in the dyehouse. The color matching section is set up in a laboratory nearly 100 feet away from the drug room. With 34 dye machines in continuous operation, hundreds of samples of the many styles and colors run daily had to be brought back and forth between the dyehouse, drug room, and color matching section.

Why not some sort of mechanical transit system to handle this steady procession of samples and divert valuable employee's time (consumed for sample carrying) back to direct production?

Taking a cue from the pneumatic dispatchers used for transacting inter-departmental business in large retail establishments, Mr. Olson had a similar conveyor (standard) installed between the drug room and the color matching section. Cost of the conveyor was $2,000. This pneumatic link-up added a new degree of efficiency to dyeing operations. It saved miles of foot steps.

Now, the dyer selects a boarded sample from the lot and brings the sock to the conveniently located drug room terminus of the pneumatic tube. The sample, together with formula card for the lot, is inserted in a carrier and dispatched to the color matching terminus of the pneumatic tube where it is received almost instantaneously.

At this time the sample is still warm from boarding, and the color matcher conditions it to room temperature before comparing it with the standard. This is done by holding the sock for 15 seconds at the outlet of a blower pipe which

U. S. Team Reports on British Cotton Industry

Some of the findings reported* by the team of American cotton textile experts that visited the United Kingdom in June of 1951 (TI for July, 1951, page 63) to study British textile manufacturing methods are:

1. There are no problems which the British cotton textile industry cannot solve for itself.

2. Cotton industry in Lancashire lacked no technical information that would increase productivity.

3. The Shirley Institute is equipped to undertake to solve any technical problem referred to it by members of the industry.

4. There was some awareness that Lancashire's management and labor had not applied that store of technical information with the urgency the times demanded.

5. Mule spinning was responsible for extremely large amounts of waste in winding and weaving, and the small packages caused low productivity when compared with larger packages of ring spun yarn. Suggestions were made for the reduction of mule cop waste, for better packaging of sales yarn for shipment to reduce mashing or bending of soft cop end; and for the training of winding and weave room personnel to eliminate, where possible, the unwinding or pulling-off of long lengths from the cops.

6. The multiplicity of processes used in the manufacture of plied yarns caused excessive use of manpower in this section of the industry. Team believed that twisting could be accomplished by use of single end cones or cheeses in twister frame creels (pulled off over end) or by the use of beams in creels without jeopardizing quality in any way.

7. There was a comparative lack of simple laboratory equipment for physical testing to control quality in the various processes. Quality control by statistical analysis did not seem to be in general use.

8. Moving and positioning of materials by skilled labor were observed in some mills in Lancashire. Sometimes laps were carried from pickers to cards by hand. Roving bobbins often were seen doffed and carried in operative's arms to end of frame and deposited in a receptacle called a "skip," in contrast to being doffed directly into a box pushed along the frame. Piling of section beams seemed to be a common practice. Racks were recommended to conserve manpower and prevent damage to yarn.

9. Lighting in some rooms appeared to be inadequate for proper work. Team generally agreed that standard of lighting was lower in British mills than in U. S.

10. The Lancashire loom has remained fundamentally unchanged since the early days of power loom weaving. A high percentage of weaver's time is devoted to routine duties of carrying filling and refilling shuttle. Replenishing the filling requires the weaver to stop loom, remove shuttle, and skewer a new bobbin of filling. Team believes that automatic looms, properly adjusted, can produce fabric that is equal in quality to, or better than, fabric produced on non-automatic looms.

11. Mixes of only 6-8 bales of short staple cotton were often found.

12. Condensers in calender roll sections of cards and drawing frames permit placing up to 50% more sliver in cans.

13. Spring-bottomed roving truck was used that allowed lower layers of roving to rise to top of truck as upper layers were removed (principle same as spring type sliver cans).

14. There was a tendency to "lap-up" broken ends instead of twisting them up.

15. Continuation of the use of antiquated methods in warping, spooling, and beaming departments is considered a tremendous waste of manpower—i.e., low speed spoolers, low-speed warping and beaming, ball warping, long-chain beaming and Scotch beaming, non-automatic quilling.

16. Use of rewound filling is increasing.

17. Mechanical bobbin strippers did not appear to be in general use.

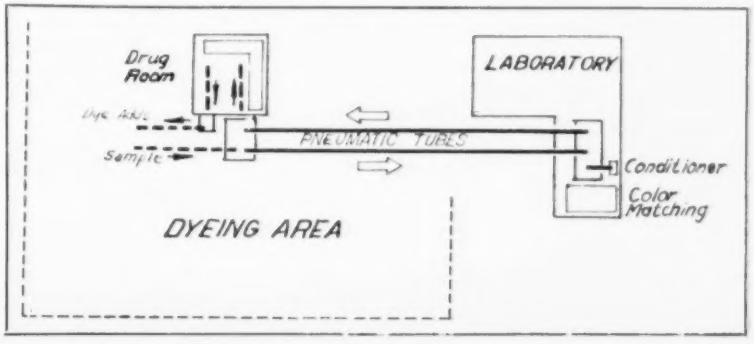
18. Waste due to extra ends in loom beams appeared high.

*Copies of the report, entitled "The British Cotton Industry," may be obtained from the British Productivity Council (formerly Anglo-American Council on Productivity: U.K. Section), 21 Tothill St., London, S. W. 1, England. Price, post free (excluding air mail), three shillings.

impinges air (at room temperature) through the sock. After matching, the sample and formula card, indicating whatever dyebath corrections necessary, are returned to the drug room by pneumatic dispatch. Dyebath additions are quickly mixed and delivered to the dyer.

Phoenix finds that lots can be processed quicker since the flow of sampling has been speeded up, color matching is better regulated, and saved steps are saving money —$6,000 annually.

PNEUMATIC dispatcher layout between drug room and laboratory at Phoenix Hosiery Company.



A Simple Cotton Fiber Testing

Equipment and techniques to provide a choice of instruments and methods most suitable to individual needs in testing fibers.

THE DEMAND for more nearly perfect cotton fabrics and competition from rayon and synthetic fibers have made a closer control of cotton quality more urgent. Fortunately for the industry, the use and development of improved testing instruments and methods have increased rapidly during the past few years.

Interest in applied fiber technology by mills and merchants is increasing; many firms are interested in knowing just what types of equipment and laboratory will meet their needs. This, of course, depends entirely upon the purpose the laboratory will serve, and for this reason blanket recommendations cannot be made. An attempt will be made, however, to outline modern laboratory techniques with the hope that any particular organization might be able to choose the instruments and methods most suitable for its needs. Laboratory instruments for testing cotton fibers are in the process of change and any selection made at this time must be subject to revision at frequent intervals.

Cotton, until recently, was sold on the basis of grade and staple and on type or actual samples. Instruments are now used to determine the quality of the cotton within grade and staple, particularly when cottons from one area are compared with those from another. No attempt is made to describe all of the instruments available for testing cotton fibers nor will the instruments be listed in order of greatest importance for a given organization. The order in which the instruments are described here is, to some extent, reflected in the accuracy and speed of the instrument and method of test as applied to the merchandising of cotton.

Micronaire. Fiber fineness as measured by the Micronaire is important to merchants and mills because it is related to (1) the twist multiplier and, therefore, the rate of production in a cotton mill, (2) neps in the card web and yarn appearance grade, (3) dyeing and finishing, (4) yarn strength and uniformity, and (5) spinnability to a certain degree.

The Micronaire is an air permeability method for measuring fineness (Fig. 1). A sample of cotton weighing 50 grains (3.24 grams) is placed in a cylinder 1″ in diameter and compressed to a length of 1″. Air at a pressure of 6.0 pounds per square inch is passed through the sample, and the pressure drop across the sample is measured by an air flow indicator. The pressure differential is calibrated in terms of approximate weight per inch for American upland type cottons. Within the upland type cottons the instrument actually measures, to a large degree, the cell-wall thicknesses or so-called "maturity" of the fiber.

Long staple upland cottons and particularly Sea Island and Egyptian type long staple cottons, where the cell diameter is comparatively small and the cell walls thicker relative to the diameter than typical upland types, tend to give a higher Micronaire reading than the weight per inch as obtained by the array method. Coarse Asiatic type cottons with thick cell walls give lower Micronaire readings than those obtained from weight per inch measurements. The relative fineness of samples within the same type can, however, be measured on the Micronaire with adequate precision and speed for routine testing.

A balance for weighing the sample for Micronaire tests should be selected on the basis of enough accuracy to give reproducible results, and the instrument should permit rapid weighing. The IL-3 type Torsion balance and the Shadowgraph balance Model 4104-A, when carefully operated, will give good results. In air-conditioned rooms where air currents are pronounced, the balance should be used under a hood or shield to prevent air currents from affecting the weighing. A simple hood made of sheet cellophane reinforced at the corners is adequate (Fig. 2).

The Micronaire can be kept in calibration by use of a mercury manometer, one or more standard samples of cotton of known Micronaire reading, and the two master plugs furnished with the instrument. An air gauge, such as the Marshalltown No. 30 Retard Gauge, may be more satisfactory in a routine testing laboratory than the mercury manometer, provided it is frequently calibrated with the latter.

It is not good procedure to change the pressure regulator on the Micronaire too frequently. The instrument should be put in calibration when set up and checked daily by running a sample of standard cotton, the Micronaire reading of which is known. The master plugs are then checked, and if the standard samples and the plugs are all on the correct readings, no further calibration is needed. In checking the cotton and

Laboratory for Mills

By S. C. MAYNE, JR.[1], JIM N. LITTLE
and EARL E. BERKLEY[2]

EXCLUSIVE

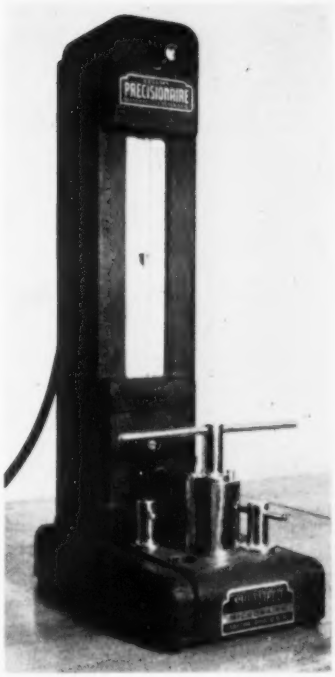


FIG. 1. Micronaire for measuring fiber fineness.

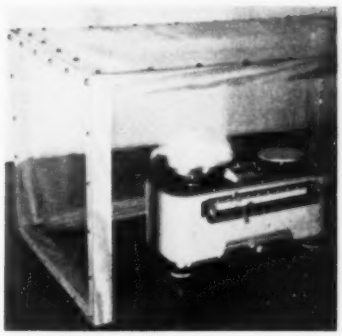


FIG. 2. Balance and hood for weighing cotton for Micronaire tests.

the plugs, a tolerance of ± ½ scale division is allowed. If the instrument is found to be out of calibration, it should be calibrated in accordance with the instructions furnished by the manufacturer.

Standard samples for calibrating and checking the Micronaire can be prepared by carefully blending a uniform sample of cotton on the picker, card, or a laboratory blender. If a sample is to be used as a standard for adjusting the level of test, it should be submitted to a number of qualified laboratories to establish a Micronaire reading that will be generally acceptable.

The data in Figure 3 were obtained with the cooperation of the laboratories listed in the legend. These three samples are typical of ACCO standards used to keep all branches of the laboratory system together. The data indicate that the samples are uniform and that all laboratories were on the same level of test since the results are within experimental error (± 0.2) of the mean. It is advisable to use two or more standards of this type with a variation of at least one full unit (i.e. 4.0 to 5.0 Micronaire reading) for calibrating a new Micronaire. A series of samples covering a wide range of fineness should be used regularly for checking the level of test of Micronaires.

Colorimeter. The Nickerson-Hunter Cotton Colorimeter, a photoelectric cell instrument (Fig. 4), may be useful in a cotton fiber testing laboratory because it distinguishes between bright and dull or gray cottons and gives a measure of the chroma, i.e. yellowness of the sample. Color of cotton gives an index of field damage, overheating in gin dryers, and the presence of immature fibers. Color data may be used in a mill to prevent changes in shade or tone of the gray yarn and to prevent warp streaks and filling bars in fabrics. The data also enable a merchant or a mill buyer to maintain a uniform level of color in classing cotton throughout the season.

Cotton contains more or less color, depending on its origin and treatment. Fully matured cotton from freshly opened bolls is white to ivory color. As it is exposed to sunlight, it will bleach white. If stored, it will become a soft ivory to cream and finally light buff. The speed at which the color transition takes place is dependent upon moisture and temperature. The higher the moisture and temperature, the more rapidly the color

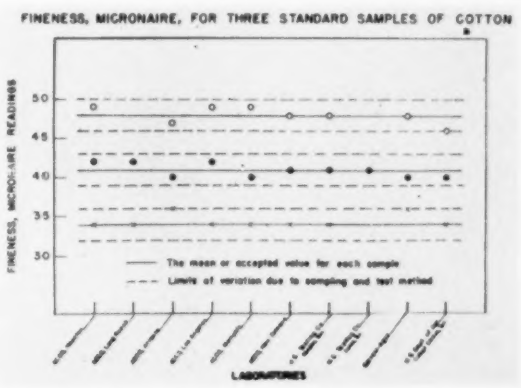


FIG. 3. Micronaire readings obtained by six units of the ACCO Laboratory system, three commercial laboratories, and U. S. Department of Agriculture, on three samples of cotton. All readings were within ±0.2 of the mean.

1 In charge of testing ACCO Fiber and Spinning Laboratory system, Houston, Texas.
2 In charge of Atlanta Branch of ACCO Laboratory.
3 Director of ACCO Fiber and Spinning Laboratory system.

FIG. 4. Nickerson-Hunter Cotton Colorimeter.

will change from white to cream. If cotton is left in the field and subjected to field damage, it may turn gray or even blue.

Immature cotton killed by frost, diseases, or insects contains a relatively high percentage of sugar. When the fibers die, the sugars and nitrogenous materials in the protoplasm of the cells tend to turn yellow upon exposure to the air. The Colorimeter will measure the changes taking place and will, therefore, aid in evaluating the cotton quality.

The classer's sample, or one of similar dimensions, is adequate for color measurements. The surface to be measured is placed on a window and weighted to give good reflectance. The current is turned on, and readings are taken when the cross bars come to rest.

Strength Tester. Cotton fiber strength as measured on the Pressley Strength Tester (Fig. 5) is important for certain finished goods such as sewing threads, tapes, and tire cord, and is valuable in the manufacture of many types of fabrics. It is also of value in mill operation because the number of ends down in spinning and the number of warp end breaks are frequently associated with weak fibers.

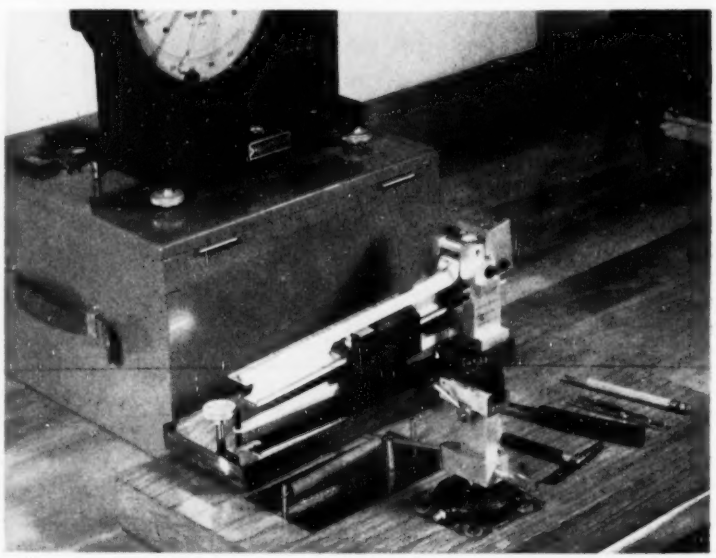
The Pressley strength tester is simple and easy to operate but difficult to keep in calibration. Pressley strength values are influenced by many factors, among which are (1) the length of the fiber in a given sample, (2) the degree of paralleling of the fibers in the bundle, (3) the tautness or absence of crimp in the fiber when clamped into position, (4) the span between grips (or gauge length), (5) the speed at which the weight rolls down the inclined lever, and (6) the moisture content of the fibers. It is difficult for any operator to control all of these factors simultaneously. For that reason, frequent checks on standard samples are essential when running Pressley tests.

The Pressley tester has been modified to reduce errors induced by forementioned variables. The ratchet in the wrench, as received from the manufacturer, has been replaced with a spring attached to the vise, as shown in Figure 5. A T-shaped wrench has been found to be much easier on the operator's hands and thus permits greater speed and accuracy.

A sensitive balance of the Roller-Smith precision type (Fig. 6) with a capacity of 3 mg is used to weigh the bundles for the Pressley strength tester.

Standard samples of known strength are needed for calibrating and checking the Pressley Testers. The same samples used for cali-

FIG. 5. Pressley strength tester with vise mounted with spring arrangement to replace the ratchet in the wrench.



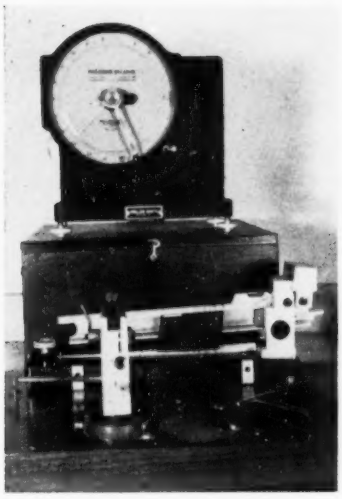


FIG. 6. Balance for weighing fiber bundles used to measure Pressley strength.

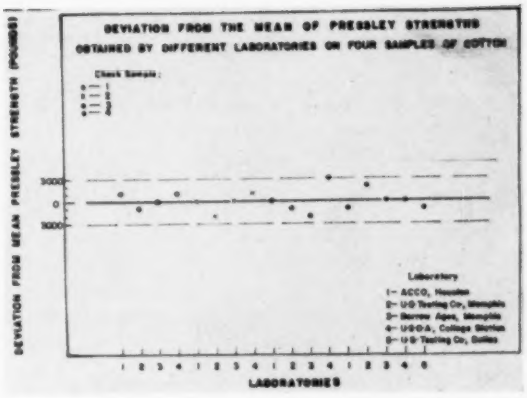

DEVIATION FROM THE MEAN OF PRESSLEY STRENGTHS
OBTAINED BY DIFFERENT LABORATORIES ON FOUR SAMPLES OF COTTON
Check Samples:
DEVIATION FROM MEAN PRESSLEY STRENGTH (POUNDS)
3000
0
-3000
Laboratory
1- ACCO, Houston
2- U S Testing Co, Memphis
3- Barnes Agee, Memphis
4- USDA, College Station
5- U S Testing Co, Dallas
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 5
LABORATORIES

FIG. 7. Deviations from the mean Pressley strengths obtained by different laboratories on four ACCO standard samples.

brating the Micronaire can be used for the Pressley. The data in Figure 7 represent ACCO standards developed with the cooperation of the laboratories listed in the legend. The results were all within the experimental error of the mean.

Deviations of ± 2000 pounds per square inch are expected on the Pressley tester for weak cottons, ± 2500 for medium, and ± 3000 for strong cottons. Bundle size varies with fiber length and strength; therefore, best results can be obtained by using standard samples of about the same length and strength of the samples of unknown strength to be tested. Two or three of the unknown samples should be tested, then a standard sample of the appropriate length and strength should be used to check level of test of the Pressley Tester before proceeding.

The three instruments already described will give enough data in addition to grade and staple for most operations. Larger laboratories may wish to include a measurement of the percentage of non-spinnable waste and fiber length.

Shirley Analyzer. The Shirley Analyzer (Fig. 8) will separate the trash, dust, dirt, and the extremely short fibers from the sample, thus giving an indication of the non-spinnable waste when compared with previous waste records. The heavy motes and other trash in the cotton will come out on the first pass. It is usually necessary, however, to run a sample through the Shirley Analyzer twice, particularly if it is low grade cotton, in order to remove all of the light leaf trash.

The percentage of non-spinnable waste is valuable in a study of the relationship of grade to percentage waste of the different staple lengths. It does not measure, however, the total mill waste because a certain percentage of spinnable fiber is lost in card strips and other waste. To get an accurate measure of the Shirley Analyzer waste, the results of two or more samples weighing 100 to 200 grams each should be averaged.

A Torsion Balance, Style 253, (4.5 kg capacity) is satisfactory for weighing the samples used in the Shirley Analyzer test (Fig. 9).

Fiber length, as designated by

FIG. 8. Shirley Analyzer for measuring non-spinnable waste in raw cotton.

Protect Washable Woolens from Moths

Woolens that come out of the wash not only clean, but proof against attack of fabric pests, are said to be in the offing. EQ-53, a moth-proofing product developed by entomologists of the U.S. Department of Agriculture, is expected to be on market shelves by next spring, when homemakers begin to prepare their woolens for storage.

With EQ-53, essentially a mixture of DDT and other chemical carriers, the housewife can mothproof her blankets, sweaters, and other washable woolens by pouring a few spoonfuls of the solution into the washing machine containing the woolens. EQ-53 also may be added to the woolens during or after rinsing. The treatment can be made in nearly all home washing machines — automatic, semi-automatic, or wringer-type — or can be used in a wash basin or tub.

Tests with EQ-53 have indicated that for each pound of woolens being washed, as little as two teaspoons of the solution added to the wash water of an average-size washing machine, thoroughly mothproofs the fabrics. Woolens treated in this way and then stored were said to be completely protected against the feeding of the larvae of both clothes moths and carpet beetles for more than a year.

Manufacturers interested in obtaining additional information about EQ-53 should write to the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, Washington 25, D. C.

Guest Towels with a "Used" Look?

Arthur Godfrey, radio and TV star of the Columbia Broadcasting System, recently presented each of 300 luncheon guests with a Cone "Super-Spongy" guest towel on a hilarious program which gave a new slant on the towel business.

While attendants were distributing the towels, Mr. Godfrey read a letter accompanying them from Herman Cone, chairman of the board of Cone Mills. High point of this portion of the program came when Mr. Godfrey read the trials and tribulations of a towel manufacturer trying to get people to use guest towels. According to the letter, guests will go to any length to avoid using a clean, unwrinkled guest towel. This includes using the host's bathrobe, bathmats, window curtains or anything else in the bathroom. A possible solution, which caused hearty laughter on the program, is to manufacture guest towels with a built-in "used" look to make guests feel more at home.

the cotton classer, provides a suitable index of length for most mill operations.

Sorter. The Suter-Webb Sorter (Fig. 10) can be used to measure fiber length in instances where a precise measure of length and length uniformity is needed. A Roller-Smith Precision balance with a capacity of 100 mg is used in conjunction with the Sorter to weigh fibers separated into length groups. The Suter-Webb Sorter is also valuable for determining fiber damage and evaluating the lint remaining in the waste from the various processes.

In cotton fiber testing, sampling is of the utmost importance, because the most carefully conducted test will not yield correct results if the sample is not representative. When the laboratory sample is taken from the classer's samples, a small portion should be taken from each layer of cotton formed by the distributor in the gin and composited, or blended, before testing.

Although a standard atmosphere is not essential for operation of the Micronaire, Nickerson-Hunter Cotton Colorimeter, and Shirley Analyzer, a well insulated room maintained at a standard atmosphere of 70 F $\pm$ 2 degrees temperature with a relative humidity of 65 $\pm$ 2 per cent should be used for length and strength measurements.

Additional instruments and methods may be added as needed, but for many organizations, one or more of the foregoing instruments should provide good control over cotton quality.

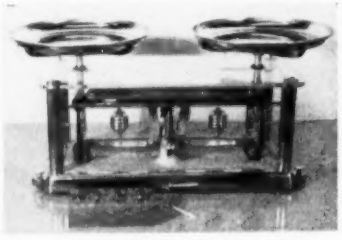


FIG. 9. Balance for weighing cotton samples for Shirley Analyzer test.

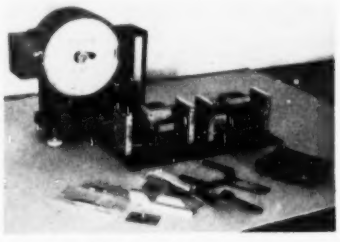


FIG. 10. Suter-Webb Sorter, auxiliary equipment, and balance for measuring fiber length and length uniformity.

OLD METHOD of stamping boxes at Airmaid Hosiery meant using rubber stamps and stamp pad.

NEW METHOD. Machine prints all data at one time and has cut cost of operation in half.

How a Texas hosiery mill

Cut Box Stamping Time in Half

Staff Prepared
EXCLUSIVE

A NEW box stamping machine has more than halved the time required to affix the proper price, size, color, and style on each box of hosiery leaving the Airmaid Hosiery Mills, Dallas, Texas. The Markem stamping machine is especially designed to handle this type of print job accurately and fast. In fact, it will run at such a high rate, 1000 boxes per day, that it takes an operator a week or so of operating experience to approach the press speed.

The printing machine replaces a desk covered with rubber stamps which had been used until a few months ago. Not only was this a slow and dirty job, but as is characteristic of rubber stamps, the markings were not always too clear.

The operator now picks up six boxes at a time, and after a little practice she is able to run the six through at full machine speed. She then picks up six more and the cycle is repeated.

Type is pre-set on the stamping machine and changing to any new price, size, color, or style merely involves turning a type wheel to the proper location.

The foreman of the packaging room says that she has cut time required for this operation in half.

Stabilization of Rayon Fabrics by

By J. A. WOODRUFF
and
I. H. WELCH
Textile Research Department
American Viscose Corporation

EXCLUSIVE

THE EARLY production of rayon was limited to continuous filament yarn and was known as artificial silk. This yarn never found its use in fabrics where laundering shrinkage was a problem, but the yarn was used in fabrics that made use of the continuous length, lustre, decorative qualities, and cheapness. It was not until the advent of staple fiber that rayon entered the market in suitings, shirtings, pajamas, dresses, and draperies.

Aside from the suiting field, the other end uses mentioned all require one important property for ultimate success. The required property is complete washability which includes color as well as stabilization. Limited stabilization or shrinkage control of rayon fabrics has been and is still being obtained with urea formaldehyde, melamine formaldehyde, and modified urea formaldehyde resins. However, none of these resin type finishes is entirely satisfactory with regard to shrinkage control and complete washability.

Shrinkage control may be obtained through the use of these resins, but unfortunately, the resins are removed by laundering and/or alkaline washing conditions which are not uncommon. The result is evident in progressive shrinkage in the range of 4 to 8% which usually occurs between the first and the fifth laundering. Aside from the progressive shrinkage, fabrics treated with such resins have the undesirable property of retaining chlorine when chlorine is present in the laundry bath. When the garment is pressed, the chlorine is released as hydrochloride acid and the cellulose fibers are attacked, resulting in reduced tensile strength. Progressive shrinkage and chlorine retention are two excellent reasons why considerable effort and time are expended by chemical suppliers, rayon manufacturers, and dyers and finishers in the development of a new approach to shrinkage control.

Development of Avcoset. The Textile Research Department of the American Viscose Corporation has developed a process for the shrinkage control of rayon fabrics known as Avcoset. The early development started with the application to fabric of an alkaline solution of cellulose ethers which were precipitated on the surface by sulfuric acid. This treatment resulted in added stiffness which was quite permanent. These cellulose ethers helped to minimize the shrinkage of rayon fabrics, but only when large amounts of the ethers were used which normally rendered the fabric unacceptable in a garment because of the stiffness.

Trials were made by reducing the amount of cellulose ethers and adding formaldehyde to the acid bath; then the fabric was dried and cured. This, of course, was a two-bath process and one which was difficult to control; however, the treatment imparted stabilization to the rayon fabric without the objectionable stiffness.

About three years ago, it was found that if formaldehyde were present in the alkaline solution of hydroxy ethyl cellulose and the temperature below 60 F, it was then possible to add sulfuric acid to the solution to lower the pH to 1.3 without coagulation of the hydroxy ethyl cellulose. It is the result of this combination of Avcoset C* (alkali soluble cellulose ether) and formaldehyde when applied at a pH of 1.3 fol-

FIG. 1. Shrinkage control on several different fabrics as well as a comparison with a control fabric that has been commercially finished with urea formaldehyde.

	"AVCOSET"						UREA FORMALDEHYDE	
NUMBER OF WASHINGS	RAYON CHALLIS		RAYON GABARDINE		RAYON PIQUE		RAYON CHALLIS	
	WARP	FILLING	WARP	FILLING	WARP	FILLING	WARP	FILLING
1	0.0%	+0.3%	+0.3%	+1.4%	0.0%	+0.6%	+0.7%	2.1%
2	0.3	+0.6	0.	+1.4	0.3	+1.1	1.9	3.3
3	0.3	+0.8	0.3	+1.4	0.6	+0.8	3.3	2.5
4	0.3	+1.1	+0.6	+1.4	0.3	+0.8	4.1	3.3
5	0.3	+1.1	0.3	+1.1	1.1	+0.6	4.7	2.8
6	0.8	+1.7	0.8	+0.8	1.4	+0.6	5.3	2.8
7	1.4	+0.8	0.3	+1.1	1.1	+0.3	6.4	2.5
8	1.4	+1.4	0.6	+1.1	0.8	+0.8	7.2	2.5
9	1.4	+0.8	1.1	+0.6	1.1	+1.1	7.5	2.5
10	1.4	+0.8	0.3	+1.1	1.9	0.3	7.8	2.5
20	1.7	+1.1	1.4	+1.4	1.9	+0.3	8.9	2.2
30	1.9	+1.4	1.7	+0.8	2.2	0.0	9.7	2.2
40	1.7	+1.4	1.7	+1.1	1.9	+0.3	10.3	2.8
50	1.7	+1.4	1.9	+1.1	1.4	+0.8	10.3	2.2

*Trade Mark of American Viscose Corp.

the Avcoset Method

lowed by drying, curing, washing, and relaxed drying that comprises the Avcoset process. Both the formaldehyde and the cellulose ether contribute to stabilization.

Formaldehyde has long been known to be an excellent reactant for use in obtaining shrinkage control of cellulosic fibers but has always been difficult to control. The cellulose ether minimizes this danger of inconsistency of the formaldehyde reaction, and also aids in the finishing of the fabric by reducing the tendency of the fabric to be extended or stretched during the final finishing operations.

FIG. 2. Effect of chlorine bleach in the laundering cycles on tensile strength of Avcoset treated fabric in comparison with a fabric treated with urea formaldehyde.

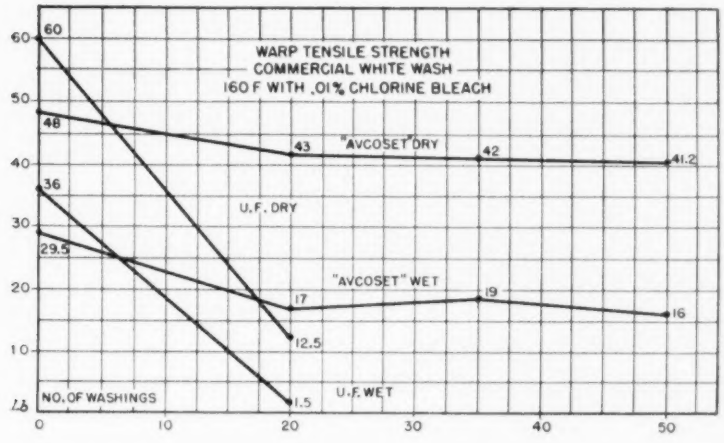
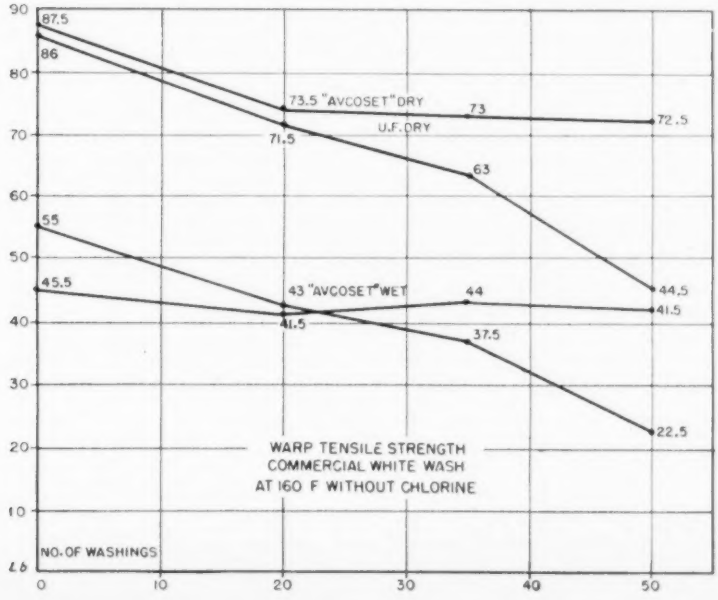


FIG. 3. Difference in retention of tensile strength to repeated launderings of urea formaldehyde treated fabrics as compared to Avcoset treated fabrics is indicated.



Fabrics Which May be Processed. The process is applicable to fabrics constructed of rayon and blends of rayon with acetate, nylon, wool, mohair, and the acrylic fibers. It is recommended that the proportion of rayon used in the construction be greater than the adultrant fiber, although satisfactory shrinkage control has been obtained in blends where as much as 50% of acetate or nylon has been used. In the blends containing wool or mohair, it is recommended that these fibers not exceed 25% of the total fiber content.

Typical Formula. The application of the formula as given here for rayon does not lend itself to cotton due to the reduction in ten-

Advantages of the Process

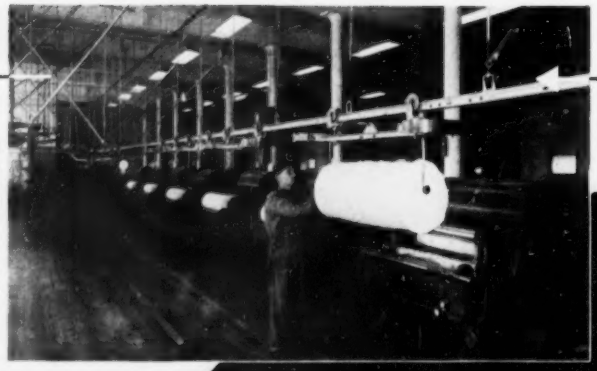
(1) Excellent shrinkage control of the fabric throughout its normal life. Treated fabrics must have below 2% initial shrinkage and not more than 2% progressive shrinkage through 20 consecutive washings in accordance with the cotton wash test procedure of the CCC-T-191a Federal specifications. The shrinkage results usually stay below 2% shrinkage throughout 50 washings.

(2) Treated fabrics are not chlorine retentive. Many garments, if labeled washable, will be subjected to the action of chlorine bleach whether washed at home or at a commercial laundry. If the fabric has been finished with a nitrogenous resin, chlorine will be retained and during pressing will be liberated as hydrochloric acid causing degradation of the cellulose and subsequent loss of strength. Avcoset treated fabrics will not be affected adversely by normal bleaching.

is reduced during repeated washing

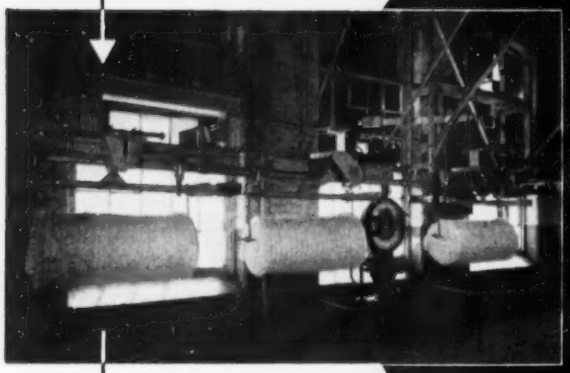
(3) The tensile strength of fabrics cycles, probably due to the abrasive action of the washing machine. Numerous tests have proved that the retention of tensile strength of Avcoset treated fabrics is superior. Excellent resistance to abrasion has been proved also by garment wear tests.

(4) Fabrics so treated improve many end uses for rayon and also open up new end uses such as dress shirtings, children's apparel, and sheetings to the rayon industry.



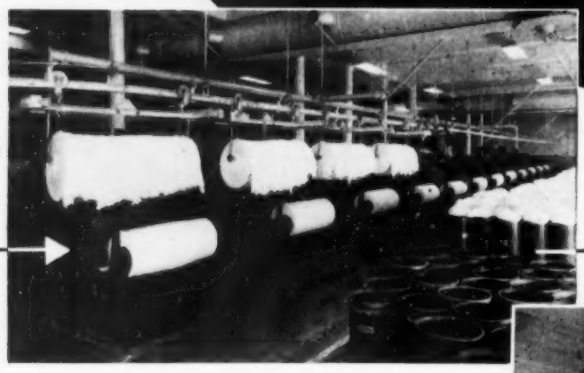
At the scale lap carriers move across scale section when weight is within tolerance and roll to the card room—all automatically. Signal sounds when weight is off tolerance requiring release by picker tender.

Lap Carriers roll by gravity from pickers to scale.

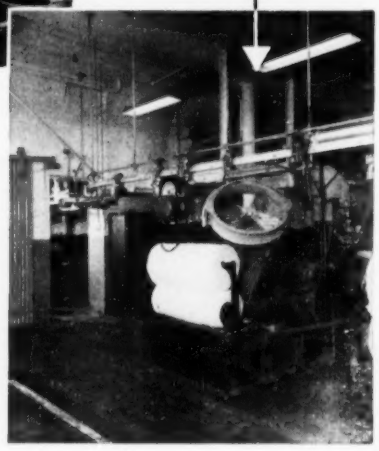


Overhead Handling *delivers* Laps to Cards *and keeps* Card Room Ceiling Clean

Train of laps move constantly throughout the card room for manual creeling of cards.



Empty carriers return to pickers. Note the high-velocity fan which sends blast of air to ceiling preventing lint accumulation.



Let your American MonoRail engineer tell you about the time and money-saving advantages of American MonoRail Overhead Handling equipment and cleaning. Just drop us a line.

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE CLEVELAND 7, OHIO

sile strength of the cotton by at least 35%.

A typical formulation is:

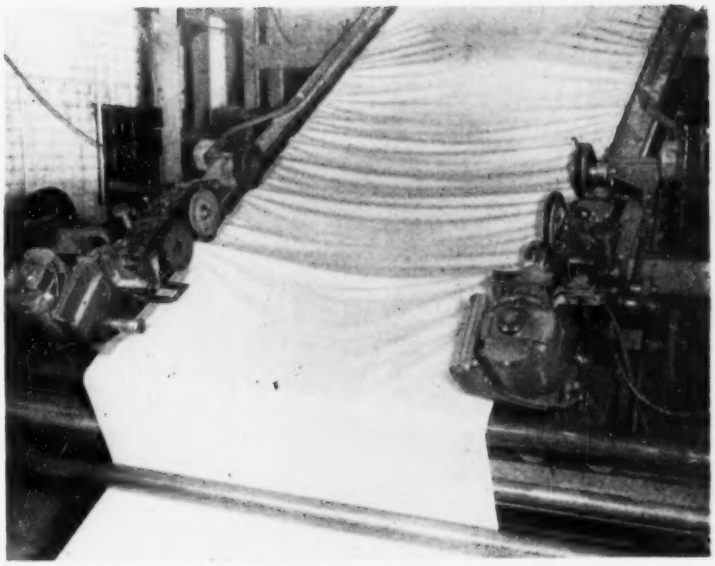
Avcoset C cellulose ether	8 lb
caustic soda 50%	21.3 lb
formaldehyde 37%	80.0 lb
sulfuric acid 66° Be′	21.5 lb
Total volume	96 gal

Preparing the Bath. To prepare the formulation, the cellulose ether is added to 20 gallons of cold water 60 to 80 F while stirring, and stirring is continued for at least 10 minutes. Propeller type agitators are adequate for mixing. The caustic soda is added and the stirring continued for 10 minutes. Sufficient ice is added to reduce the bath temperature to 35 F and agitation continued for a minimum of 40 minutes. Cooling coils or a cooling jacket may be used instead of the ice.

The volume is adjusted to 60 gallons with water, and the formaldehyde is added while stirring is continued. The volume is then adjusted to 84 gallons with water, and ice if needed, to a temperature not higher than 55 F. The sulfuric acid, previously diluted to approximately a 25 to 30% solution at not over 80 F, is added while stirring to adjust the pH to 1.3. After the volume has been adjusted to 96 gallons, the resultant solution is strained into the pad trough and is ready for use.

The preparation of the cellulose ether bath, although not complicated, definitely requires care, and the following precautions must be observed to obtain a uniform and satisfactory finish bath.

The cellulose ethers require wetting out in cool water with agitation for a minimum of 10 minutes to allow for thorough wetting out and swelling of the cellulosic material. This procedure facilitates the second operation, dissolving the cellulose ether with caustic soda at relatively low temperatures (35 F). It is the combination of swelling, alkaline concentration, and temperature which gives a clear solution of the cellulose ether. To allow the addition of the sulfuric acid to the alkaline solution without causing the cellulose ether to precipitate, it is necessary to have the formaldehyde present, and the bath temperature must be under 60 F. Sufficient sulfuric acid of a concentration of 25 to 30% is added to result in a bath pH of 1.3. pH determinations may be made by using a pH meter or pHydrian control papers. The two ranges of paper recommended are the 1.4 to 2.8 and the 1.2 to 2.4. Papers may be purchased from most laboratory equipment supply houses.



ENTERING END of an overfeed pin tenter showing the overfeeding mechanism. Fabric must be dried in a relaxed condition.

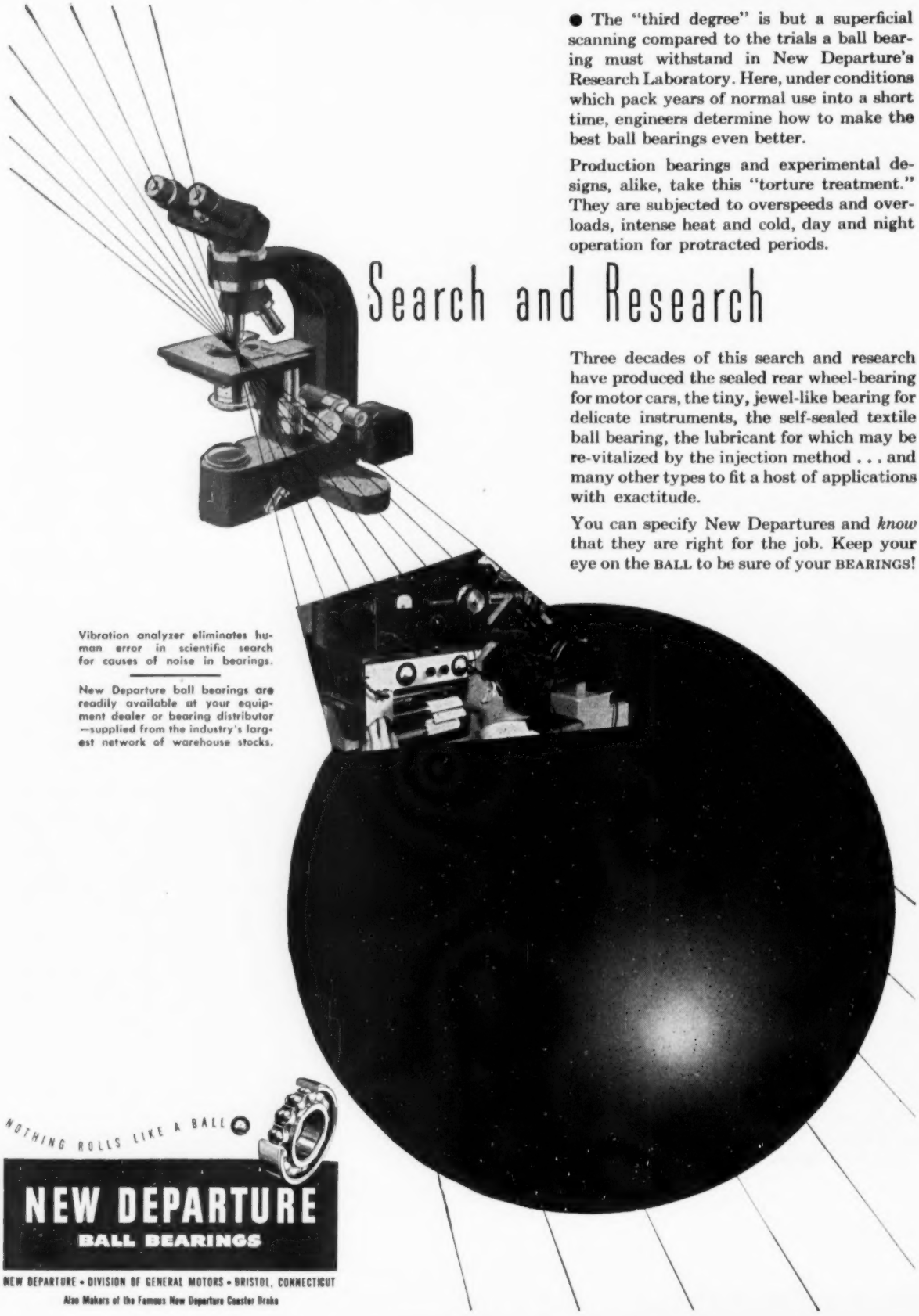
Additions to Bath for Adjusting Hand. It is often necessary to adjust the hand of various fabrics for particular end uses. If additional firmness is desired, most of the thermoplastic resins, such as the Rhoplex resins, may be added in amounts up to 5%. Low viscosity starches up to 2% can be added to give crispness. If dryness of hand is desired, dispersions of silica such as Ludox or Syton W-20 may be added in concentrations up to 2%.

Where softness or suppleness is desired, Avcosel 104 may be added in concentrations up to 0.5%. All percentages are based on solution. Combination of any of the named materials may also be added so that a wide hand variation from soft to firm is obtainable. All of these materials are added prior to the addition of the sulfuric acid. The hand obtained by using these materials in combination with Avcoset is a permanent hand and is maintained by the fabric throughout repeated launderings at boiling temperature.

Processing Procedures. The Avcoset is applied on a padder, and the pad box should be arranged to provide a double immersion which aids in obtaining an even surface application prior to completing the impregnation at the nip. Either a two-bowl or three-bowl padder may be used, and pressures of 200 to 400 pounds per lineal inch are recommended.

Following padding, the impregnated fabric is dried on a clip tenter frame where the fabric is set for width. Generally, it has been found advisable to dry approximately ½ inch over the final desired width. The drying is best accomplished at temperatures of from 240 F to 280 F. Considerable formaldehyde fumes are released into the air at the entrance and exit of the frame, and provisions must be made to exhaust these fumes.

After the fabric has been dried, it is cured. Curing may be satisfactorily accomplished in almost any convenient machine, provided the time-temperature cycle is cor-



● The "third degree" is but a superficial scanning compared to the trials a ball bearing must withstand in New Departure's Research Laboratory. Here, under conditions which pack years of normal use into a short time, engineers determine how to make the best ball bearings even better.

Production bearings and experimental designs, alike, take this "torture treatment." They are subjected to overspeeds and overloads, intense heat and cold, day and night operation for protracted periods.

Search and Research

Three decades of this search and research have produced the sealed rear wheel-bearing for motor cars, the tiny, jewel-like bearing for delicate instruments, the self-sealed textile ball bearing, the lubricant for which may be re-vitalized by the injection method . . . and many other types to fit a host of applications with exactitude.

You can specify New Departures and *know* that they are right for the job. Keep your eye on the BALL to be sure of your BEARINGS!

Vibration analyzer eliminates human error in scientific search for causes of noise in bearings.

New Departure ball bearings are readily available at your equipment dealer or bearing distributor —supplied from the industry's largest network of warehouse stocks.

NOTHING ROLLS LIKE A BALL

NEW DEPARTURE
BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT
Also Makers of the Famous New Departure Coaster Brake

rect. Experience has proved that 330 F for 2½ minutes is the most satisfactory cycle, although higher temperatures for a shorter time, or a longer time cycle with reduced temperatures, may be used to suit available equipment. It is absolutely essential that controlled curing conditions exist to assure good results.

The next step is washing which cannot be omitted because the fabric after curing is at a pH of approximately 2.6. Also, as in the application of any stabilizing finish, it is necessary to provide an opportunity for wet relaxation of the fabric. The cured fabric may be satisfactorily neutralized and washed in a rope type washer or in a tensionless open width washer. Washing should take place at 120 F to 160 F at a pH of from 9.0 to 10.0 obtained with soda ash and in the presence of a good synthetic detergent. Following neutralizing, a water rinse is necessary to clear the fabric and allow it to finish at a pH of from 6.0 to 7.0.

Dry Fabric in Relaxed Condition. It must be remembered that to acquire stabilization regardless of the finish or chemicals used, the next phase of finishing, the final phase, is perhaps the most critical. It is essential that treated fabrics be dried in a relaxed condition, either in an overfeed pin tenter, loop, or airlay dryer. However, the overfeed pin tenter is preferred in some instances because a more positive control of length and width dimensions is maintained, and the fabric may be taken directly from the pin tenter ready for examination and put up.

If the loop or airlay dryer is used, it is necessary to steam frame the fabric to width and to remove the wrinkles that have been dried into the fabric. Warp tension must be held to a minimum to assure good shrinkage control. If a loop, airlay, or pin tenter dryer is not available, it is possible to dry on a clip frame and then finish on a compressive shrinkage range. In order to obtain the desired hand or appearance, it is sometimes necessary to semi-decate or calender the fabric. Regardless of what is done to the fabric following relaxed drying, tension must be held to a minimum; otherwise, whatever stretch is put into the fabric will show up as shrinkage during the first wash test.

12 Denier Nylon for "Luxury" Hose

The 12 denier monofilament nylon yarn developed over the past several years by Du Pont's Textile Fibers Department, and under experimental study since last fall, is in limited commercial production, the company announced recently.

The lighter weight yarn was developed especially for hose even more luxurious than 15 denier, according to Charles E. Mears, nylon sales manager in Du Pont's Textile Fibers Department. It was made to fill a definite need voiced by the hosiery industry as well as retailers and consumers, he said.

"While the new yarn possesses the same relative high strength and quality of other Du Pont nylon hosiery yarn counts, we recognize the comparative strength limitations because its weight is 20 per cent lighter than 15 denier," Mr. Mears added. "However, we sincerely feel that its production fills the widespread demand for 'luxury' hose."

Mr. Mears also stated that experimental work with the new yarn showed that it is best suited for machines of 60 gauge or higher for full-fashioned, and 400-needle or finer for seamless. Therefore, Du Pont is recommending that hosiery manufacturers confine 12 denier hosiery to high-gauge and fine-needle machines.

"The decision to sacrifice service for sheerness will be one for the consumer to make. The 12 denier monofilament hosiery yarn will not replace any of the six other deniers now produced by the company. The company will continue to produce nylon hosiery yarn in 15, 20, 30, 40, 50, and 70 denier," Mr. Mears said.

Progress on Colorfastness Tests

Progress in the development of international test methods pertaining to various aspects of colorfastness on textiles is reported to have resulted from a three-day conference in New York, November 10-12.

The meetings, held at the headquarters of the American Standards Association, were part of a project of the International Organization for Standardization underway since 1948.

Agreement was reached on the general principles of the fastness tests and on specific test procedures. Test methods considered were of two types — those pertaining to colorfastness to processing treatments and those pertaining to fastness to use conditions. In the former group, test procedures for fastness to each of the following agencies were agreed upon: water, water spotting, sea water, rubbing, acid-spotting, alkali spotting, carbonizing, peroxide bleaching, potting, mercerizing, stoving, soda-boiling, chlorination, chrome and metals in dye baths, and hypochlorite bleaching.

Use tests considered included fastness to such items as perspiration, light, cross-dyeing, and washing.

Two methods for colorfastness to light were considered. Of these, the daylight method was confirmed, but the carbon arc method, practiced largely in this country, was held over for further discussion. A test method for hand washing was agreed upon, but the severe laundry washing test is yet to be determined.

Two "gray scales" were accepted for rating the magnitude of color changes in various tests.

Test procedures for fastness to perspiration and cross-dyeing were held over for further consideration.

"Charlie—what do you suppose happens to boys who don't use **Swift's Soaps?"**

Our customers tell us that Swift's Soaps save time and money in textile operations. There are many good reasons why you, too, will find the right soap in Swift's complete line.

Swift's Soaps have excellent physical form . . . proper uniformity of composition.

Swift's Soaps perform outstandingly in dyeing, fulling, scouring and other specialized operations.

Swift's Soap line is complete . . . there's a *right* soap product for every textile need.

Swift's Soaps are backed by our years of specialized experience and research. We're ready to put all our resources to work to help solve particular soap problems.

Swift's Soaps are sold from coast to coast with distribution points strategically located to assure prompt delivery of these and other fine Swift's Soaps!

Vertex Flakes • 557 Flakes • White Ribbon Chips • Wool Flakes

Call **SWIFT** first for **SOAPS**

SWIFT & COMPANY

Soap Department, Chicago 9, Illinois

"In every group of people there exists an immeasurable reservoir of potential capacity that we are just beginning to realize."

Raymond E. Henderson of Dan River Mills on

Vocational Education

THANK YOU for the privilege of speaking to you on this occasion. It is one that I have looked forward to for several months. I am pleased to be one of that company of dedicated people in the cause of industrial education.

Of the many fine pieces of legislation, the Smith-Hughes Vocational Act of 1917 and subsequent legislation have been of special significance. Through a relatively small expenditure of money, new vistas have been opened up for people who are employed below their mental level. The funds made available have opened the door of accomplishment for hundreds of thousands of men and women whose education had been cut short in their youth. It has provided the opportunity, and these people have developed their faculties because of the opportunity.

Therefore, when the individual begins to realize his potential and becomes more useful to himself, he becomes more useful to society. Thus, according to John Dewey, he begins to explore everything there is in his job of large and human significance. Again, when any basic and fundamental good is done for an individual, a chain reaction sets in and every segment of our society is benefited. Our democracy is made more vigorous. Our culture is improved. Industry becomes more efficient and our sinews in time of peril are strengthened and hardened.

Address delivered before The American Vocational Association annual convention, Hotel Statler, Boston, Mass.

Since our scientists harnessed nuclear energy, all of civilization has been living on the brink of disaster. It is my belief that all mankind will live in the shadow of destruction until the strong of the earth live by the tenet of the dignity and worth of the individual. When the basic principles of a democratic people are applied to nourishing the spirit and intellect of the individual, only then can any man feel safe.

Next to the basic physical needs that have to do with life's very existence, the seeking of recognition is the most vital thing in a man's life. The need for a feeling of worthwhileness is paramount. Frequently, he does not understand this vital need and it takes the form of vague longings and dissatisfaction. But even if he is seeking something that he does not understand, he is seeking it just the same. And, unless he finds it —at least to some degree—he will be a frustrated and unhappy man.

In every group of people there exists an immeasurable reservoir of potential capacity that we are just beginning to realize. This great source of power can be tapped. Those of us who direct the destinies of other people have just caught a faint glimmer of the great potential that is bound up in the people who do the world's work.

You ask, "How can this be done? What is the formula?" The solution is so simple most of us overlook it. As time has gone by, we have made some headway in our relationships with employees and students. Seldom do we see a man in a senior position these days who deliberately mistreats people. Most of us have learned it does not pay. But we have gone only part of the way.

Employers in America have spent countless hours and untold millions of dollars searching for new machines, new techniques and better methods. This time and money has paid off handsomely.

We hear a great deal of talk about the need for better buildings and equipment for our school work. I do not discount the need for constant improvement of physical facilities for education purposes of all kinds. At the same time, these things are distinctly secondary to the quality of people who are responsible for teaching—whether it be children or whether it be adults.

One of the finest schools for adults I have ever seen was a school down in Georgia that was conducted in an old dwelling house with the inside walls knocked out and partitions put in for classrooms. These rooms were called "stalls" and were equipped with rough tables and chairs and blackboards. The whole expenditure for this school was not more than $3,000, and yet, more than 400 people went to school in this building in shifts from 8:00 in the morning until 10:00 in the evening.

They were poor in material resources, but were rich in the qualities of heart and mind of the teachers and other interested people who conducted this school. I

PERKINS
HOLYOKE
Perkins Calender Rolls—the natural result of the longest and broadest experience in the industry—give quality that is definitely reflected in your product. Perkins service includes refills of any make of calender rolls.
B. F. PERKINS & SON, Inc.
HOLYOKE, MASS., U.S.A.
LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

am reminded of the reply President James A. Garfield made when asked by an acquaintance what was the ideal college. President Garfield replied: "Mark Hopkins on one end of a log and a student on the other is my idea of an ideal college." President Garfield had been a pupil of Mark Hopkins as a boy and young man at Williams College in Massachusetts.

We have spent only an infinitesimal amount of time and money in the investigation of the most complex organism with which we have to deal—the human being. Our efforts in this direction would pay off as handsomely and would cost little except in the expenditure of some time in objective and profound thinking.

Clarence G. Francis, Chairman of the Board of General Foods Corporation, said, and I quote:

"You can buy a man's time."

"You can buy a man's physical presence in a given place."

"You can even buy a measured number of skilled muscular motions per hour or day."

"But you cannot buy enthusiasm, you cannot buy loyalty, you cannot buy the devotion of hearts, minds, and souls."

"You must earn these things."

There is a mysterious and irresistible force at work in human affairs. It is like yeast working in a vat of dough. This force has evidenced itself from the time we have recorded history. Many wise men believe it is humanity struggling blindly to fulfill its destiny. We need only to look back to our history for some of the highlights:

In the year 1215 the English barons, backed by the peasants, forced King John to sign the Magna Charta. In 1517 the Protestant Reformation, spearheaded by Martin Luther, came to its climax. This movement gave impetus to the teachings that no intermediary was to stand between the individual and his God.

Early in the eighteenth century, Pestalozzi, the Swiss teacher, developed a new respect for the human personality of children. Through him the educational system was redesigned and its effect is present to this day.

The American Revolution in 1776 was a part of this movement. The French Revolution in 1789 adopted the slogan that is still important to Frenchmen: "Liberty, equality, fraternity." This upheaval was just another highlight in the march of the common people to their place in the sun.

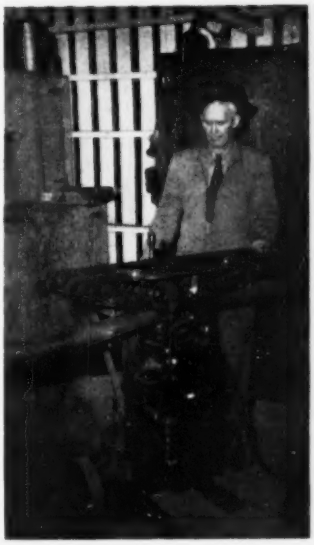
Because of the intolerable working conditions in Europe, Karl Marx conceived the ideas of Communism and set them forth in his Manifesto in 1848. Abraham Lincoln announced the end to human slavery in America in his Emancipation Proclamation in 1863. The Russian Revolution in 1917 was evidence of this unrest. The rise of labor unions in Europe and in this country has been a further contributing factor.

Reforms and improvement in the status of the common man have been advanced by legislation such as Workmen's Compensation, the Child Labor Law, Minimum Wage, Unemployment Insurance, and laws governing the employment of women in industry.

As to whether all of these movements are good or bad, I do not attempt to say. That some of the idealistic dreams for improving the lot of the common man have misfired—such as Communism and the radical elements in the labor movement—is another subject that we have no time for here today.

This movement continues and is being rapidly accelerated. It is not caused by more enlightenment of the masses, although this is a contributing factor. This movement is going on in countries where no such enlightenment has taken place. We see it in different forms in China, India, Egypt, Iran, and Africa. Where it will end, we do

Portable Pipe Bender Real Time Saver



A portable pipe bender now in use at Cone Mills Corp., Greensboro, N. C., has proved to be a valuable tool in that it can be moved from one part of a job to another, saving a great amount of time formerly spent in carrying pipes or conduit to a central location for bending. Now they can be shaped on the spot where they are needed.

The pipe bender is made with a conventional bending head which will handle conduit up to 3" in diameter and will make both offsets and 90-degree bends. Pressure is applied through a 4-in. hydraulic cylinder with a 16-in. piston stroke. An electrically driven Blackhawk Porto-Power hydraulic pump mounted on the unit supplies the power.

The bender, designed by Bryant Electric Co. of High Point, N. C., is put in operation by a spring limit switch, which must be held in the "On" position for the piston to move. If the operator takes his hand off the switch, the drive motor stops. This limit switch also prevents overtravel of the piston.

The whole unit is mounted on 12-in. solid-rubber-tired wheels, and a hand crank and screw are used to raise or lower the wheels so that the bender can rest on its base on the floor or can be moved about from place to place as needed.

A tray is welded to one side of the unit to protect the power unit and to hold bender shoes and other tools.

now available

Celanese's new color-pigmented filament acetate yarn is available in the following *fashion-approved* colors:

N937	Yellow Green	N383	Blue (Royal)
N974	Green	N944	Navy
N935	Grey	N948	Blue Green
N956	Brown	N945	Red (Dark)
N988	Red (Bright)	N987	Pink
N951	Yellow	C-6	Rose
N950	Blue (Light)	C-3	Green (Mint)
N957	Blue (Medium)	#16	Black

Celaperm stock is available in 100 and 150 deniers.
Other deniers from 45 to 600 are available on special order.
Celaperm comes on 4-pound cones or can be delivered on section beams.
Celaperm is available in 200-denier thick and thin yarns.

For Celaperm yarn color cards, prices, delivery dates, promotional plans, and for technical assistance in the most efficient utilization of these new yarns, see your Celanese representative or contact any of the following branch offices:

New York 16, N. Y.	180 Madison Avenue
Boston 10, Mass.	140 Federal Street, Room 1602
Camden, N. J.	300 Broadway
Charlotte 2, N. C.	1603 Liberty Life Building

Celanese Corporation of America, 180 Madison Avenue, New York 16, N. Y.

Celanese* CELAPERM*

THE PERFECTED COLOR-PIGMENTED ACETATE YARN

*Reg. U. S. Pat. Off.

not know. Whether it is good or bad, we cannot tell. One thing we do know, that the masses of people are going to have more to say about their lot in life than ever before.

If we believe in Christ's teachings—and most of us do—man is created in the image of God. Every human being is a wondrous and complex creation and is different in make-up and personality from any other that has ever been created. Yet in all humanity there is a common denominator regardless of economic status, education, cultural background, nationality or color.

Every person has an insatiable hunger for recognition and accomplishment. And every man wants something to feel important about, to feel wanted and confident of his own worth as a person, to have some reason for being. He wants to recognize in himself the dignity of his manhood.

The teacher and the employer who can create the atmosphere in which these needs find nourishment and in which these qualities flourish, will be mankind's great benefactor. We—employers and teachers—create the atmosphere in which all people under us work. Our individual personality and basic philosophy are impressed and diffused throughout all those under our direction. If, within the sphere of our authority and influence, we will help our people to fulfill their basic psychological needs, their response will be unbelievable.

Most people are inarticulate. Their longings are vague and nebulous, and few can put them into words. Yet, they want a firm sense of belonging. They want to be important in the human family. They want respect from their fellows and to feel pride in being members of the human race. They want your deep and abiding interest in their affairs. They want the privilege of making mistakes without being humiliated as a result.

I know some of you must be thinking that this is an idealistic philosophy which may sound very well in a speech, but which simply will not work. No doubt some of you can recite exceptions to back up your feeling that people will not respond in any such manner in practical affairs. I can recall many instances to the contrary, myself. But the people who will not respond to this treatment are so few as to be unimportant. I am talking about 90% or more of humanity—and this 90% will respond as I have described.

"We have spent only an infinitesimal amount of time and money in the investigation of the most complex organism with which we have to deal—the human being."

"Next to the basic physical needs that have to do with life's very existence, the seeking of recognition is the most vital thing in a man's life."

This force that I have tried to describe is a power that has more possibilities than is stored up in atomic energy. It is a vast and fabulous and unexplored territory. It is lying dormant—waiting to be used. A few forward-thinking men are beginning to visualize its possibilities. So far we have just penetrated the outer edges.

Many of these men and women who are wage earners with limited education and skills are shy and are laboring under feelings of inferiority and mental incompetence. They are frustrated and are living in a mental atmosphere and engaged in employment far below their potential. They need encouragement and assistance and perhaps some gentle prodding from us. They need nourishment and kind persuasion. When they are handled thusly, their response is unbelievable. It is like a hard and thorny bush bursting into flower with the coming of warm rain and sunshine. It is like the dull and uninteresting caterpillar turning into the brilliant butterfly. It is like the dreary landscape of winter burgeoning with blossoms in the spring.

I look back, in memory, to so many men and women who were plodding along in their day's work, frustrated, puzzled and half alive, doing jobs far below their mental possibilities, and not knowing how to change their lot. Then some understanding and generous individual in a position of authority or influence touches their lives and the world takes on a different aspect. It is as if the prison door were swung open and a man steps out into the light and sunshine of knowledge for the first time in his life.

I would like to tell you a few of the many heart-warming and gratifying experiences I have had with individual men and women in vocational school.

I shall always remember, with respect and affection, John Jones, who worked for me down in Georgia nearly 20 years ago. He had a fifth grade education, and when I first knew him, was a machine fixer in a textile plant. At the age of 40 he started to vocational school and was a regular attendant for five years. His route from home to the school building carried him past a corner hangout of the town loafers. Many of these evenings he ran the gauntlet of cat calls and ridicule because he was attending night school. During the five years of my experience with him, he climbed steadily with his company and became a foreman of a major department in one of the largest tex-

gives you **all around fastness**

in Amanthrene* BROWN RRD

A VAT COLOR in paste or double powder form

BETTER FASTNESS Fast to washing, chlorine or peroxide bleaching, soda boiling, sunlight, perspiration, dry cleaning.

BETTER PRINTING Unsurpassed for *printing* of cotton and rayon sports wear, draperies, slipcover fabrics . . . affording the advantages of a homogeneous, *non-drying* paste, or a finely divided dispersible powder.

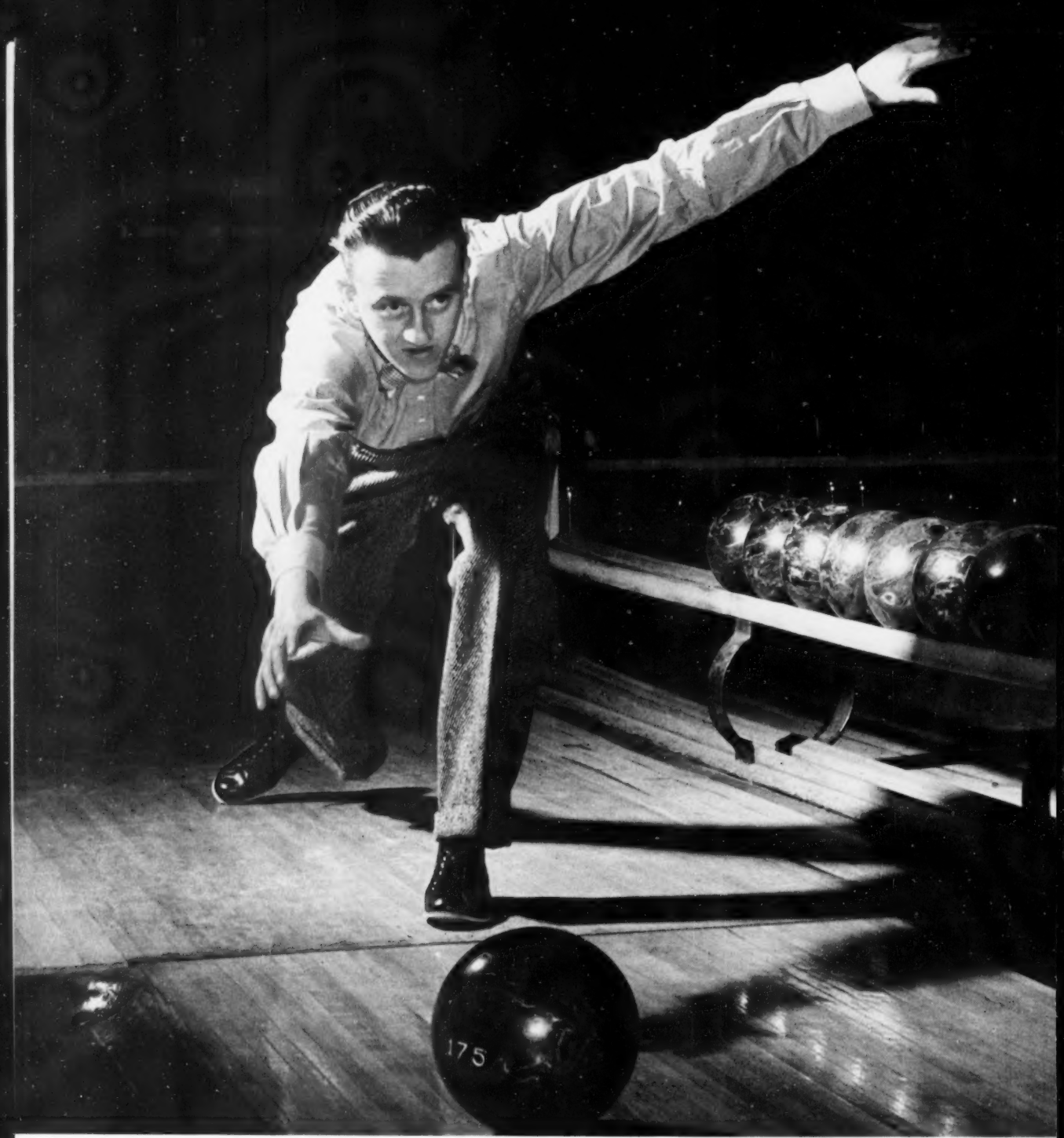
FINER SHADES Gives a full chocolate shade of brown and, in combinations, meets your precise requirements in blotch work and finer engravings.

WELL WORTH TRYING A.A.P. representatives are ready to show you in your own plant how this superior vat color and others of the Amanthrene range can assure you of finer, faster colors. For a demonstration and individualized data, consult our nearest branch.

AMERICAN ANILINE PRODUCTS, INC.

50 Union Square, New York 3, N. Y.
Plant: Lock Haven, Pa.
Branches: Boston, Mass.
Providence, R.I. • Philadelphia, Pa.
Paterson, N. J. • Chicago, Ill.
Charlotte, N. C. • Chattanooga, Tenn.
Columbus, Ga. • Los Angeles, Cal.
Dominion Anilines & Chemicals, Ltd.
Toronto, Canada • Montreal, Canada

*Reg. U.S. Pat. Off.



He's a great Bowler — BUT

How does he compare with Hank Marino?

Hank Marino, elected "Bowler of the First Half Century" by the Bowling Writers of America was former National Individual Match Game Champion. He has bowled eleven 300 games in league play. He retired undefeated in Match play.

In everything we do, we make comparisons . . . In Full-Fashioned Knitting, the one standard of comparison is the 30-section "Reading" Machine with a production of 14 to 16 dozen pairs of superior quality stockings in 8 hours. Simple and flexible in operation. 51-gauge, 60-gauge, 66-gauge.

TEXTILE MACHINE WORKS • READING, PENNA.

tile plants in the South.

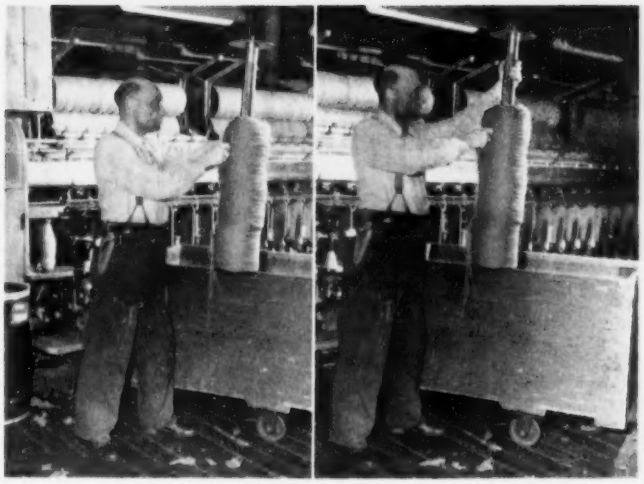
Then there was Harry Smith. Harry was a frequenter of the town's pool halls. He had been discharged at least once by virtually every boss in this big textile plant. He was a typical town loafer and ne'er-do-well. Harry fell in love with one of the local girls who had made up her mind to improve her status in life. She persuaded me to give Harry another chance in the mill and she urged him to attend evening school. Through the interest of his wife and his direct superior, he became an excellent worker on his job. Today—15 years later—Harry Smith is general manager of a successful textile plant in a southern state.

Another heart-warming experience was with Miss Amanda Lee, who worked for Dan River Mills for more than 40 years. Miss Lee was an old maid, with limited education, who had worked all her life at semi-skilled labor. At the age of 53, she started taking public school subjects in evening school. Twelve years later—at 65—she retired from our mills and graduated with a high school diploma given by the State Department of Education of Virginia. The following year she enrolled at State Teachers College in South Carolina. Next spring she completes her college course, with a Bachelor's degree, with a fine scholastic record. What practical purpose she will put her education to, I do not know, and maybe she doesn't know either. She hopes to find employment either in teaching or in the personnel department of some industry. But whether she does or not, her whole personality has been changed and she is one of the best adjusted and happiest people I know. The remainder of her life—however long it is—will be richer and much more satisfying because of her increased knowledge.

I love to recall my experience with Willard Malcolm, also an employee of our mills. Willard was a high school graduate—very shy and diffident—with a painful inferiority complex. He had been working at semi-skilled work for five years and was so discouraged he was on the point of leaving. Quite accidentally, I stumbled upon his case, had a talk with him and persuaded him into evening school. He was put into a department under a man who had an intuitive understanding of young men who were trying to make their way. This year—9 years after my discovery of Willard Malcom—he was made an assistant mill superintendent of one of our largest plants.

Of course, there are no striking economic gains and improvement in position for the great majority of these people. But I have never known an adult to get into school whose work did not improve and who did not become a better citizen. If a woman learns to be a better housekeeper and acquires the knowledge of how to better feed her family on a limited budget, it is well worthwhile. If any person becomes more useful on his job, he becomes more useful to himself and to society.

These people need us—not only our superior knowledge and education which we can impart to them, but more importantly, our friendship and patient support. And we need them. Our society, our culture, our country needs them. And if we merit the name and position of teacher and employer, the productivity of our plants will rise to unbelievable levels. The standard of living for all people will move to unprecedented heights. And what is far more important, our workers and we will find a sense of fulfillment and a more meaningful existence.



Photos courtesy "The News," Alexander Smith, Inc.

Cutting Wool Roving Off Spool Can Be Dangerous

Safety is no accident. It is intentional — particularly in woolen carding and spinning.

Paradoxically, the most dangerous assignment in this area has nothing to do with machinery. Only a knife is involved. Removing roving waste from spools should be a simple, safe procedure, but it isn't. Serious hand accidents occur with greater frequency in this operation than in machine tending.

The wrong way to cut a spool is shown on the left. Don't hold hand behind roving. If the knife slips, it won't be the roving that gets chopped up.

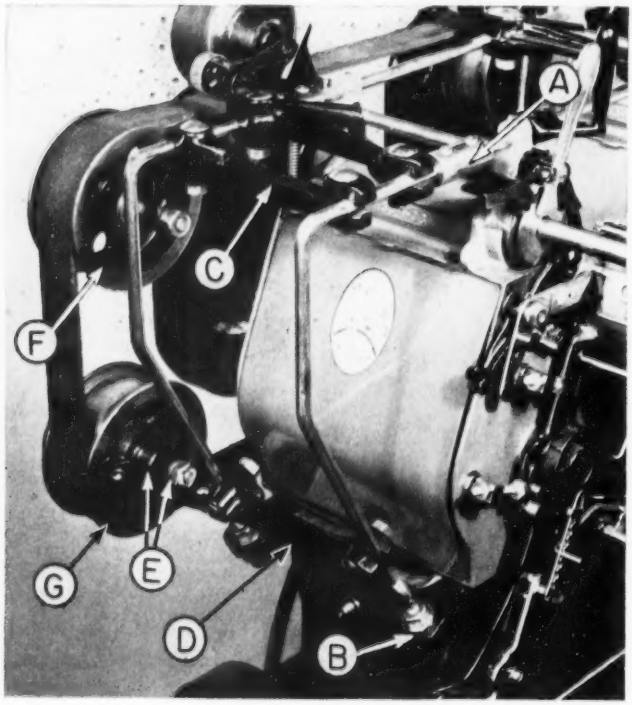
Correct way to cut spool is demonstrated in the photo on the right. The operative has a firm hold on the barrel of the spool so that if the knife slips, he won't get hurt.

Remember too, a sharp knife is a safer knife. Wool will dull the blade quickly. Keep it honed. It's a good idea to carry a whetstone in a belt sheath along with a knife sheath.

THIS IS NO. 97 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation



HOW TO ALIGN BELT AND END IDLER PULLEY ON NO. 50 MACHINES

When No. 50 Precision Winders are installed properly, you may run the same endless belt for a period of years with a minimum of maintenance.

The following procedure, followed by Universal service men when installing No. 50 machines, will help you get the proper pulley alignment when making your own installation.

The two main tie rods connecting the frames are used to line and level the machine; but the end sections, to which the End Idler Pulleys are fastened, are lined up separately. The method of doing this is as follows:

1. Attach the end sections of the tie rods to the main sections by means of the Coupling (A).

2. After tightening the two Couplings, push the lower end of the rods *as far as possible* into the slots (B) in the bed; with the fingers, adjust the nuts to the approximate position. A level across the end tie rods will help get a better setting before tightening the nuts at (B).

3. Mount the Top End Idler Pulley Bracket (C). Tighten the end near the pulley first; the V-groove at that end is a finished surface and should properly locate the other end of the Bracket. Then tighten the far end.

4. Mount the Lower End Idler Pulley Bracket (D). This, too, has a finished V-groove at the end near the pulley, which should be tightened first. This Bracket is also equipped with washers (E); by shifting these washers, pulley (G) can be brought into line with the Top End Idler Pulley (F). Align the motor pulley with spindle driving pulleys.

5. Now install the belt and start the motor to see if the belt runs around the end pulleys without touching the flanges. You may need to make one or more of the following adjustments to make the belt run true:

a. If the belt rubs against either flange of the Upper Pulley (F), move the outer end of the Pulley Bracket (opposite end from pulley) slightly along the tie rod. The direction depends upon which way the belt is to be thrown. This can be done by slightly loosening both nuts and tapping the outer end of the Bracket to improve the alignment; then tighten this end of the Bracket first.

b. It may not be possible to eliminate the rubbing against the flanges until the lower pulley is also adjusted by moving the outer end up or down on the tie rod.

c. It may be necessary to raise or lower the tie rods by adjusting the nuts at (B).

d. To correct a slight twist in the Lower Pulley Bracket, one of the tie rods may be brought forward in the slot at (B).

e. When the tie rods are brought forward in the slot, it is important to maintain the level of the Upper Bracket.

After adjusting the lower pulley, it may be necessary to make another slight adjustment of the Upper Pulley Bracket (C) until the belt runs true.

When these adjustments are properly made, it should not be necessary to make any more adjustments for many months. If at any time the belt should rub continuously against one flange, the setting described above should be checked again.

23.2.15

March, 1953

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON

The Toll of Taxes

By RINGGOLD ARDEN

EXCLUSIVE

THE PROBLEM of taxes is always with us, and March always seems a most appropriate time to give some serious thought to the implications of excessive taxation. The hand of the tax collector seems a little heavier in March than in any other month.

We are just rounding out a period of 20 years, during which our federal government pursued a persistent policy of inflation, and tremendously high taxes made possible by inflation. Anyone can pay high taxes if the government will give him the money to pay them with. We have recently installed a new national administration, pledged to reverse this ruinous inflationary policy; balance the national budget; stabilize the value of the dollar; and reduce taxes.

This is a tremendous task, and one which will require the wholehearted cooperation of the American people with their government—a cooperation which in the past they have shown no tendency to supply. For 20 years, millions of persons have been expecting, and getting, something from the government which they could only get by increased taxation or more inflation. That these millions of persons will cooperate in demanding that the government cut off what they have been getting seems like wishful thinking.

Many hands have dipped into the federal treasury these past 20 years, and the owners of most of the hands will wish to keep dipping. The dipping had been adopted as national policy by the past two administrations, under the beguiling theory that prosperity was simply a matter of putting lots of money into circulation, and the more of it the treasury shoveled out to the greatest possible number of persons, the more prosperous the country would become.

The only possible way that the government can honestly reduce taxes is to spend less money, and that invariably makes enemies of the persons who had hoped to get the money, and who have the Christmas tree attitude toward the federal treasury. Probably the most wasteful way to get anything done is to let a government do it, but for the past 20 years we have been afflicted not only with the ordinary incompetence and inefficiency of a government, but with a deliberate administration policy of wasting money wherever possible to promote the socialist theory that prosperity and full employment can only be maintained by government largess, and its attendant progressive inflation.

For the past 20 years, it has been customary in government undertakings to regard these as opportunities for creating employment, and the more people who could be employed on a government project, the more prosperity we could expect in the area surrounding that project. This seems beyond doubt to have been settled national policy.

During the last war it was customary to find three, five, or ten times as many persons employed on a job as were needed, and the only plausible explanation for this was that the people responsible for our government wanted them to be there. The featherbedding and loafing were matters of common knowledge, constantly being aired in the newspapers; and any honest government, honestly wishing to be economical with the taxpayer's money, would have made an effort to curb this waste and eliminate as much of the extrava-

"Truce Suggestions" for "Battle of the Fibers"

In an appeal for a truce in "the battle of ballyhoo and recrimination" between cotton and wool interests and the producers of new chemical fibers, Carl A. Setterstrom of Union Carbide and Carbon Corp., during a recent address to the Textile Distributors Institute, proposed these seven "truce suggestions":

1. Ban the phrase "miracle fiber." The new fibers are no more miraculous than a new alloy or gasoline — they are products of painstaking chemical research.

2. Stop extravagant claims.

3. Keep the cost of advertising, publicity, and promotion in reasonable proportion to the value of the articles they are expected to sell.

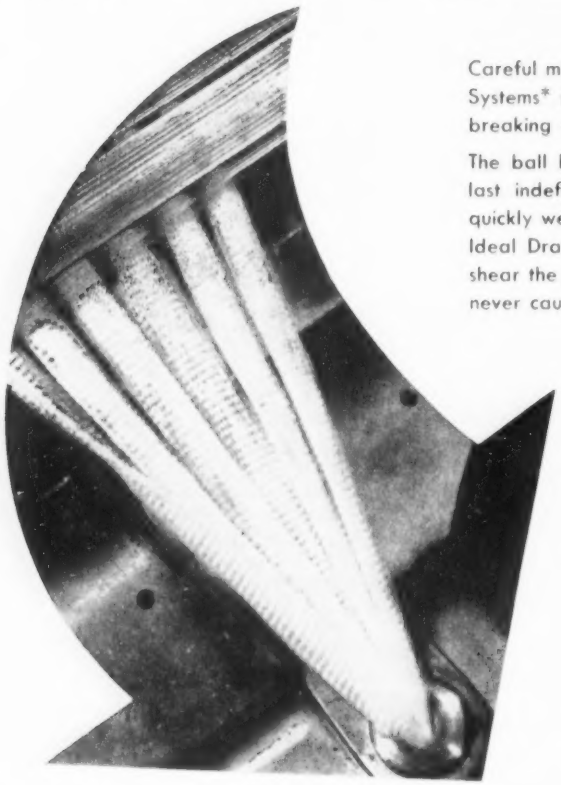
4. Pledge allegiance to the maxim "There is no substitute for good quality at reasonable cost." If the wool and cotton interests are wise, they will put most of their 1953 "warchests" into research on product improvement. They should invest their money with technologists, not spend it with hucksters.

5. The influx of new fibers places heavier responsibility and greater importance on the converter than ever before.

6. Admit that the natural fibers are better for some uses, the newer fibers for others, and that blends of old and new are frequently better than either alone.

7. Don't use any fiber as a "gimmick" or for its name only.

Ideal Drawing Rolls Produce Stronger and More Uniform Silver



(Unretouched Photograph)

Careful mill tests on hundreds of Ideal High Speed Ball Bearing Drafting Systems* show an average of 26.9% less variation and 7.4% greater breaking strength.

The ball bearings on Ideal Rolls carry all the weight and friction, and last indefinitely—whereas the conventional collars which they replace quickly wear and throw the rolls out of line almost from the start. Because Ideal Drawing Rolls are always perfectly aligned, they never bruise or shear the stock. Because they always remain perfectly synchronized they never cause unequal tension or thick or thin places in the roving.

And note the perfect Crimp

Ideal Fluted Rolls are hardened and ground to give better crimping action. This, combined with higher speeds and longer draft, allows the fibres to go into the trumpet while still warm, thus *permanently* setting the crimp.

Ideal Rolls also produce more per frame, at lower costs. When the revolutionary Evener Motion, which was demonstrated at the Greenville Show, is in production it can be added to this equipment.

Write or wire for full information.

*Patented

Ideal Industries, Inc.
Bessemer City, N. C.

gance as possible.

On the contrary, our federal authorities constantly encouraged over-employment on government projects. The government also encouraged the paying of two to four times the wages which would have been paid for the same work in private employment.

Millions of persons who have grown up under a regime of this sort, and who confidently look to the government to take care of them and lend them money and not expect them to pay it back, are not likely to take kindly to a sensible indoctrination in the economic facts of life.

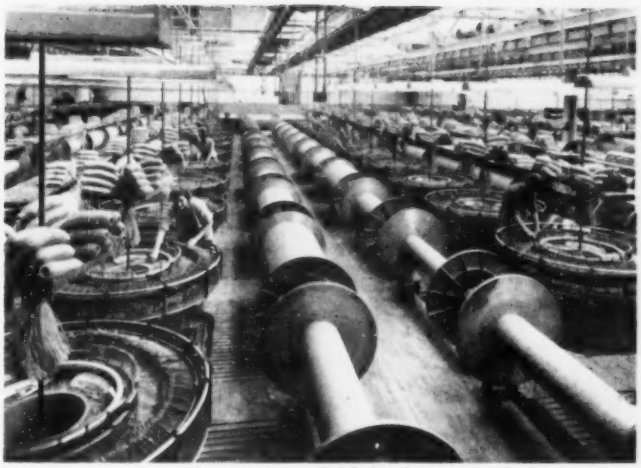
We have, during the past 20 years, been loaded up with a lot of taxes which are highly inflationary. We are not likely to ever be unloaded. The inflationary tax is dear to the politician's heart. The income tax deducted from payrolls is a splendid example of a highly inflationary tax. The payroller is interested in the figures written on the check, and not in the figures on the slip attached to it explaining what happened to his money.

Time after time, increased taxes have immediately led to labor unions demanding higher wages to pay these taxes, because from the union standpoint any reduction in the take-home pay was unthinkable. The working man must not be expected to help pay his country's expenses—somebody else must do it. "Somebody else" always figured that he didn't want to do it either.

Another inflationary tax is the one on corporations. Any money collected from a corporation by the government is just as much a part of the cost of doing business as money collected by a coal company, a power company, or a labor union. The money that the government theoretically taxes from the corporations is instantly added to the cost of what those corporations sell, and the cost of living thereby goes up.

The excess profits tax is inflationary, because it encourages corporations to spend money for uneconomic propositions, or for outright foolishness. If a corporation in a highly competitive economy can make more money than its competitors because its management is smarter than competing managements, but the government proceeds to fine the smart management for being smart, a smart management will outwit the government by spending the money for something that isn't worth buying with 100-cent dollars, but is a bargain with 18-cent dollars.

An inflation-minded administration is naturally going to turn to all of these tax schemes which are aimed at concealing from the taxpayer what is happening to him. He pays the taxes just the same, but they are collected in such fashion that his taxes appear to him as as increase in the cost of living. You will hardly find a politician honest enough, and brave enough, to fight for the elimination of these inflationary taxes and the imposition of a tax system which makes it brutally apparent to the taxpayer that he



Photos courtesy Fairbairn Lawson Combe Barbour Ltd.

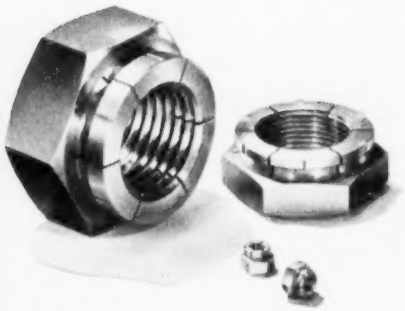
These Saint Freres circular looms in a Scottish mill weave tubular jute cloth used for making bags with no side seams. One operative tends four looms.

Burlap Bags Now Made from Tubular Fabric

For more than a century, now, burlap bags have been made from cloth woven on flat looms. In making the bags, the cloth was sewn up one side, or both. Material in these bags was often wasted due to the seams splitting or coming open.

Burlap bags made from tubular cloth woven on circular looms are now available. With no side seams to come open, waste from this source is eliminated.

Warehouse scene showing close-up view of tubular burlap bags. Note absence of side seams.



Just what are these Flexloc nuts?

"They're nuts that lock and stay put on a bolt. Once you install them, you can forget them. They sure save a lot of time in maintenance. Look at this shuttle assembly, it's fastened together with FLEXLOC *Self-Locking Nuts. We haven't had to put a wrench on it since we installed it."*

Nuts that work loose cause real trouble. Machinery is often damaged and stopped. Production suffers, deliveries lag, and you lose money. But there's a sure way to keep nuts where they belong. Specify and install FLEXLOC Self-Locking Nuts.

Standard FLEXLOCs have higher tensile strength than most other locknuts. They are one piece, all metal. And one nut covers the entire temperature range to 550°F. Stocked by leading industrial distributors. Increased capacity enables us to make quantity shipments of FLEXLOCs in a wide range of sizes. Write for literature and samples. SPS, Jenkintown 34, Pa.

FLEXLOC

LOCKNUT DIVISION

SPS

JENKINTOWN PENNSYLVANIA

Our Fiftieth Year : A START FOR THE FUTURE

does pay, and how much. Such a system would probably accomplish more in tax reduction than anything else which could possibly be done.

The graduated income tax with confiscatory top levels is an infamous device, recommended by Karl Marx, for the destruction of capitalism. A capitalist was supposed to be a man who *had* money, instead of a man who *made* money. His income was supposed to pour in naturally, without effort on his part. The American type of capitalism had not been dreamed of when Karl Marx and his associates were getting communism worked out as a going concern. American capitalism is based more on the *creation* of wealth than its accumulation, and the over-taxation of creative individuals simply dries up sources of wealth and taxation.

This over-taxation puts very little real money into the federal treasury, as has been constantly pointed out by various publications and by members of our Congress. If the entire incomes of our so-called "rich people" were confiscated, the United States Treasury would hardly notice the difference in the amount of its income. If more of this money could be left in the hands of creative individuals, capable of producing great quantities of new wealth, the treasury might really get something worthwhile out of it.

This policy of excessive tax rates to get a little bit of money is in the same category with eating your seed grain instead of having patience enough to wait for the increase of a crop. Confiscating 90 per cent of the seed corn might not produce as much grain as taking 10 per cent of the increase. It is difficult to explain this to a politician.

The cruelest tax of them all is probably that imposed by the deliberate depreciation of the value of money by government. This tax is, in effect, a capital levy, because it inexorably robs those thrifty people who have accumulated money and invested it in conservative securities, or in government bonds which are technically supposed to be conservative securities. Monetary inflation is merely a form of taxation which governments resort to when direct taxation fails.

Monetary inflation can be accomplished by the over-employment of perfectly orthodox financial methods. It is not necessary to print a lot of shin-plasters to have monetary inflation. You can do it just as well by printing too many bonds, or by the government borrowing and spending too much money, regardless of where the money is borrowed.

There are millions of persons in the United States today who thought they had saved up enough money, and so wisely invested it, that their futures were secure. These people now find their incomes cut in half so that the incomes of millions of undeserving may be doubled to compensate for the plummeting value of the dollar.

We have dabbled in socialism for 20 years. That is plenty long enough if we ever expect to win our way back to national economic stability. Maybe we have gone too far already. A practical politician of long experience recently remarked that any jackass can kick a barn down, but it takes a trained carpenter to build one. For 20 years we have had a lot of economic jackasses kicking around in our national barn. How much damage they have done can not be fully determined until a skilled crew of repairmen, capable of estimating jackass-damage, takes over.

Let us all pray that the damage to the barn is not irremediable, because we would never get a new one as good. The materials are simply not available today.

Wrinkle Tester Simulates "Clenched Fist" Technique

The Celanese Wrinkle Tester, said to be the first machine of its kind, is the invention of Dr. Reiner G. Stoll, assistant manager, Textile Division Applications Research, at the Summit, N. J., laboratories of Celanese Corporation of America. The tester is a precision elaboration of the "clenched-fist" technique for subjectively determining a fabric's crease recovery. The recently devised instrument develops random wrinkle patterns on large samples by alternately subjecting them to vacuum and pressure.

Air is pumped out of a bank of five transparent tubes into a second bank of five similar tubes. Air flow is then reversed. Solenoid valves for opening and closing connections to the two banks are controlled by a timer so that pressure cycling may be repeated as desired at 1, 2, or 5½-minute intervals. Air may be dry or saturated with moisture if it is desired to test at high humidity.

Tubes contain sealed-in rubber diaphragms set into a head piece connected with the air system. The head piece carries in its center a post to which the fabric sample is attached in the form of a tube. Under vacuum, the diaphragms collapse and cause the samples to wrinkle while specimens under pressure in the other bank hang freely and relax.

After testing, the samples are visually inspected under suitable light for comparative evaluation. Geometric patterns formed during the test may be mechanically recorded by a surface contour tracer. Where permanent photo record is required, the samples should be photographed by color stereo camera.

The instrument is being manufactured by Custom Scientific Instruments of Arlington, N. J.

Always Uniform

There is often no open-and-shut answer to slashing problems. But one thing is basic . . . only unvarying quality such as you get in Victor Mill Starch can insure smooth performance day after day.

That's why Victor is known as "The Weaver's Friend" throughout the industry.

For better penetration, stronger warps, less shedding . . . rely on Victor Mill and the conscientious help of the Keever man who serves you.

TEXTILE SALES DIVISION
1200 WOODSIDE BUILDING
GREENVILLE, SOUTH CAROLINA
Charles C. Switzer, Manager

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO

Corn, wheat and other grain products for industry since 1898

HOW OTHER MEN MANAGE

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •

Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Life and Speed of Travelers

EDITOR TEXTILE INDUSTRIES:

Is there any routine system of ring traveler changing followed by American mills? If so, what is the frequency of changing, and what are the beneficial effects?

What is the average observed life of various types of ring travelers, assuming the rings are in good condition and the travelers are the correct number for the counts spun and the spindle speed employed?

How much progress has variable speed ring spinning made in America? What are the advantages observed, and do you think that the advantage gained by installation of variable speed commutator motors outweighs the high initial capital outlay necessary if these motors are to be installed in a mill which is now on either ordinary individual motor drive or a group drive from a line shaft?

CONTRIBUTOR No. 8529
(India)

EDITOR TEXTILE INDUSTRIES:

In reply to CONTRIBUTOR No. 8529, the tremendous number of yarns being spun, not only from natural fibers, but from synthetics and blends, creates enumerable variables. There are more than 18,000 different styles, weights, and sizes of ring spinning and twister travelers, which emphasizes the fact that there are many conditions to consider in the art of spinning and twisting yarns.

There is no regular rule for changing ring travelers used by American mills. The frequency of change is largely dependent upon local conditions and personal equations, as well as spindle speeds, condition of rings, climate inside the mill, quality of cotton used, etc.

Travelers should be changed before friction has concentrated at the horns to a point where the steel structure begins to turn a straw color or blue. A soft traveler is very destructive to spinning rings. As long as the horns of the traveler retain their hardness and bright color, the ring is not being injured.

The amount of service a ring traveler gives depends also upon local conditions and personal equations. If rings are clean and in good order, the spindles plumb, and other conditions are favorable, travelers will last much longer than they would if rings are badly worn, spindles not plumb, and also if spindle speeds are not uniform. There are thousands of different styles of yarns and many different twists produced in the United States. Consequently each mill has to decide the period of time travelers will operate successfully under local conditions and

KINK CONTEST!

$100 will be awarded the winner.
Send your entry now!

This contest ends March 15, 1953.

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, March 15, 1953.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance—no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously.

Send your contest entry to:

Editor TEXTILE INDUSTRIES,
806 Peachtree St., N. E., Atlanta 5, Georgia.

From any point of view

...the right oil

for every textile processing need

Jacques Wolf & Co. offer you all types of oils in various concentrations and degrees of neutrality. Listed here are just a few of the many oils in our line—all produced under the most exacting standards. We would like to send you a descriptive list of our complete line. Samples and prices on a particular oil formulated to your specifications will also be gladly sent to you on request.

Jacques Wolf Oils

MONOPOLE OIL ®
(Double Sulphonated Castor Oil)
For bleaching, dyeing, finishing. A dispersant for dye solutions.

CASTOR OIL
(Sulphonated)
Clear, viscous oils; remain clear at low temperatures. Soluble in water; no foaming action.

OLIVE
(Sulphonated)
Made from pure Olive Oil; excellent softener and penetrator for acetates and other synthetic fibres.

OLEVENE
(Sulphonated)
Synthetic Olive Oil, used for finishing textiles as a softener and plasticizer.

TALLOW
(Sulphonated)
Heavy white paste; emulsifies completely in warm water; a softener for piece goods of all types.

PINE OIL
Solubilized, steam distilled Pine Oil, used for scouring and dyeing.

SOAKING OILS
Emulsifiable oils for lubrication of all types of yarn.

SANFORIZING OIL
A penetrator and softener for sanforized cloth.

ANTISTATIC OIL
For reducing static on all types of fibres.

JACQUES WOLF & CO.
Chemicals PASSAIC, N. J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

when travelers should be changed.

Several years ago considerable interest developed in variable speed motors operating on spinning frames manufactured by one U. S. company. It did not prove successful, and I have not heard the subject mentioned for quite some time. It developed that when variable speeds reached a certain number of revolutions the frame had to be stopped and the weight of the traveler changed. We do not know of any mill or mills experimenting with variable speed motors at this time.

CONTRIBUTOR No. 8530

EDITOR TEXTILE INDUSTRIES:

In answering CONTRIBUTOR No. 8529, it is necessary to be somewhat evasive because there are so many variables affecting travelers that the condition of the rings, type of work being run, etc., must be taken into consideration.

There is a system of changing travelers in American mills. In most instances when the rings are in good condition, spindle speed not too high, and the yarn being spun is not too harsh, the travelers are changed in two to three weeks, depending upon the spindle speed. This, of course, is based on three-shift operation and 120 hours per week.

The average life of travelers will run anywhere from the medium numbers to a large package spinning frame of 2¼" to 2½" diameter on 13s, where the travelers are changed about every 72 hours.

For instance, on 12s yarn on a 2½" diameter, No. 2 flange ring, with a spindle speed of 8150 rpm, warp wind, 4.60 twist multiple, 8" stroke, using a No. 12 circle D traveler, the change is made every 80 hours.

On a 2⅛" diameter ring with a spindle speed of 7200, using a No. 9, flange 2, circle 2 traveler, the change is made every 72 hours.

On 30s yarn, 1¾" diameter, flange 2, spindle speed of 9800 rpm, 130 on the front roll, using a 6/0, flange 2, square point traveler, the change is made every two weeks.

On a 2" diameter, flange 2 ring, with a spindle speed of 9750 on a warp wind, using a 5/0, flange 2 traveler, the change is made every two weeks.

In regard to the progress of the variable speed on ring spinning in America, this is being used quite extensively with good success. Of course, the difference here is that the front roll speeds up and slows down at different parts of the traverse so that the frame will run with less ends down per hour. On 30s yarn, with a front roll speed of a variable of 132 to a high point of 142 rpm, on soft twist, the travelers are kept in service two weeks with an end breakage of less than 24 per hour per 1000 spindles.

I do not care to judge the individual motor drive or the group drive in the front line shaft at this time; this is a controversial question.

CONTRIBUTOR No. 8531

Inexpensive Apparatus Cleans Dust Bags Well

This item was submitted in a kink contest.

EDITOR TEXTILE INDUSTRIES:

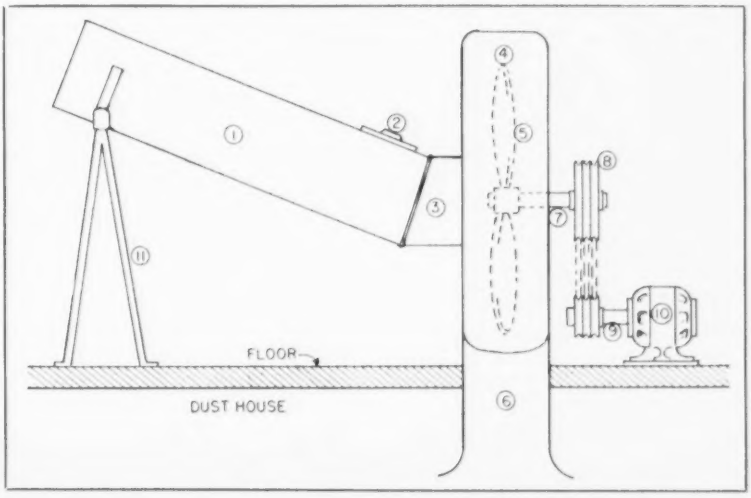
Cleaning bags from opening and cleaning equipment has always been a problem. The methods used range from machines, cleaning by hand, to using an air hose. The machine shown in the illustration serves to clean bags with a minimum of time and effort.

The machine may be built from scrap parts found at most mills, thereby making the apparatus inexpensive. The parts consist mainly of a 15" diameter galvanized pipe at least 6' in length, a 36" fan, and a 2½ hp motor.

To operate the machine, the operator must place the bag in the mouth of the pipe (1) wrong side out; then allow the draft from fan (5) to pull the bag inside the pipe until it reaches full length. A grill (3) is placed between the pipe and fan housing (4) so that should the bag slip from the operator's grasp, it will not reach the fan. A lid is cut into the pipe for the recovery of the bags or foreign particles that will not pass through the grill.

A powerful draft is produced by the fan which is driven by the 2½ hp motor (10). Power is

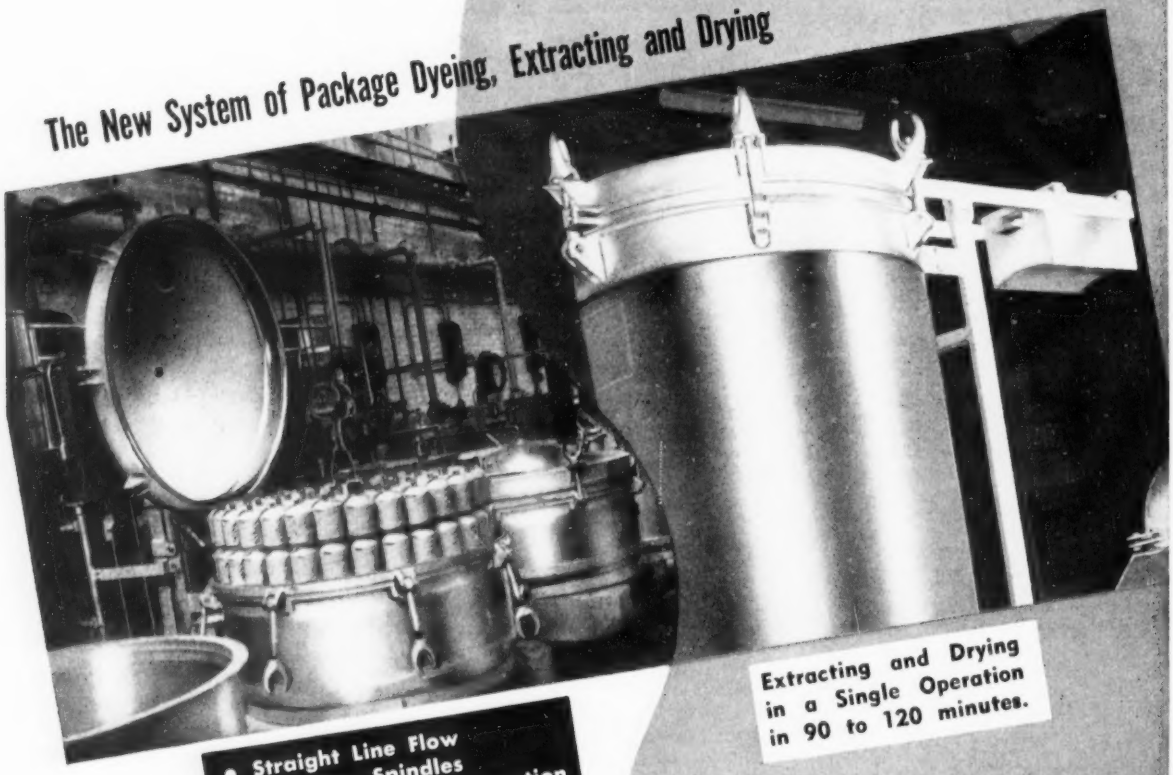
Improvised dust bag cleaning apparatus.



Save TIME, MANPOWER AND MONEY!

STIENEN
Lead with the LEADER
OBERMAIER

The New System of Package Dyeing, Extracting and Drying



- Straight Line Flow
- New Dye Spindles
- Stainless Steel Construction

Extracting and Drying in a Single Operation in 90 to 120 minutes.

Here, indeed, is another proof of Stienen-Obermaier leadership . . . The new complete cycle system of Package Dyeing, Extracting and Drying. Our new dye spindle* provides greater flow than any other previous spindle and results in more positive level dyeing. Moreover, Stienen-Obermaier's straight line flow principle is the most efficient circulating system developed. The new combination Extractor-Drier* substantially reduces labor costs . . . and cuts drying time in more than half. For complete all-around superiority and economy, we suggest you see the new "Complete Cycle System" . . . Another Stienen-Obermaier first!

BUILDERS OF
COTTON, WOOL AND RAYON DYEING MACHINES
FOR BEAMS • PACKAGES • RAW STOCK • SKEINS • CAKES
DYE SPINDLES • PERFORATED TUBES
CENTRIFUGAL PUMPS • EXTRACTORS AND DRYERS

*Pat. Pend.

Standard Fabricators
INCORPORATED
355 Walton Avenue • • New York 51, N. Y.

transmitted to the fan by means of three V-belts and pulleys (8) and (9). The amount of draft may be varied by changing the size of the pulleys on the pulley shaft and also on the motor shaft. Lint, dirt, lust, and trash removed from the bags are blown down an exhaust pipe (6), through a hole in the floor, and into the dusthouse.

CONTRIBUTOR No. 8549

WIN $100

Readers of TEXTILE INDUSTRIES are invited to enter the current KINK CONTEST. You may win the $100 cash prize by submitting idea, time-saver, or production kink. For further details, see the announcement on page 151 in this issue.—Ed.

Copy Desk Aids Designers

This item was submitted in a kink contest.

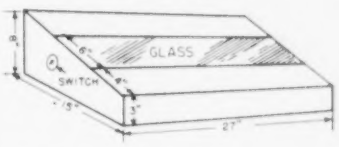
EDITOR TEXTILE INDUSTRIES:

Upon planning to start a group of looms all on the same fabric it becomes necessary to prepare a quantity of extra copies of the drawing-in and chain drafts. This enables several drawing-in operatives and chain builders to work simultaneously, so that all of the warps will be ready for the looms at the same time.

Once the original, or master, copy of the draft is made, it is a tedious and time-consuming job to make all the additional copies required. Also, despite careful checking, the possibility of errors in copying is always present. It is usually desired to preserve a copy in the files, and drafts that have been handled in the mill become dirty and torn so that a clean copy should be made for record purposes.

The designer's copy desk, as shown in the accompanying sketch, is of invaluable assistance in this type of work. It can be easily and cheaply made by any mill carpenter. The copy desk consists essentially of a light-weight portable desk, in the top of which is installed a pane of glass, with a fluorescent light arranged beneath the glass. An ordinary light bulb may be used, but the fluorescent light is cooler for the operator. Either plain or frosted glass may be used. The copy desk may be

DESIGNER'S COPY DESK



placed on any ordinary desk or table and plugged into the nearest convenient electric socket.

The original drawing-in draft and chain draft are prepared in the usual manner. A fairly heavy pencil should be used for these. The original is then placed on the glass, face up, and a blank piece of design paper is then placed over it, care being taken to have the squares on the two pieces of paper exactly fitted together. The light shining through the original will illuminate the pattern which may be readily copied on the duplicate paper without errors or omissions. This device also renders it very easy to check the completed copy. Duplicate drafts can be made in considerably less time and with much less possibility of errors than by merely copying by hand from the original.

An additional use for the copy glass is in analyzing fabrics, especially those with intricate and difficult weaves, or with a napped surface. By placing the fabric over the illuminated glass and using a standard pick glass, every detail of the weave may be readily determined.

CONTRIBUTOR No. 8541

For a Firmer, Crisper, Fuller Hand on Rayons, Cottons and Synthetics

AEROTEX® SYRUP 250 CONC. adds qualities to fabrics that make them look and perform better—and make them sell better, too!

Look at these advantages—then call in one of our technical representatives. He will be glad to show you how AEROTEX SYRUP 250 CONC. can serve your needs.

Synthetic suitings and spun rayon fabrics treated with AEROTEX SYRUP 250 CONC. take on added body and fullness.

AEROTEX SYRUP 250 CONC. imparts a crisp, firm, linen-like hand, adding to the fabric's freshly pressed appearance, providing that extra snap identified with good crease resistance.

Cotton draperies treated for spot resistance along with AEROTEX SYRUP 250 CONC. stay clean longer and retain their new look through repeated cleanings.

AEROTEX SYRUP 250 CONC. is compatible with melamine and urea resins, with starches, gums and softeners. Used alone or in combination with other resins it provides a durable, highly uniform finish, stable in bath and simple to apply.

Because of its high degree of concentration, AEROTEX SYRUP 250 CONC. gives greater economy—less handling and storage expense.

®Trade-Mark of American Cyanamid Company

Textile Finishing Bulletin #127 describes fully the application of AEROTEX SYRUP 250 CONC. We will be glad to send you a copy.

AMERICAN Cyanamid COMPANY
TEXTILE RESIN DEPARTMENT
BOUND BROOK, NEW JERSEY

BOSTON · PHILADELPHIA
CHICAGO · LOS ANGELES
CHARLOTTE · PROVIDENCE

30 ROCKEFELLER PLAZA
NEW YORK 20, N. Y.
Tel. Circle 7-0100

For further information use Handy Return Card, Page 200

Simple "Slide Board" Helps Reduce Ends Down, Keeps Frames Clean

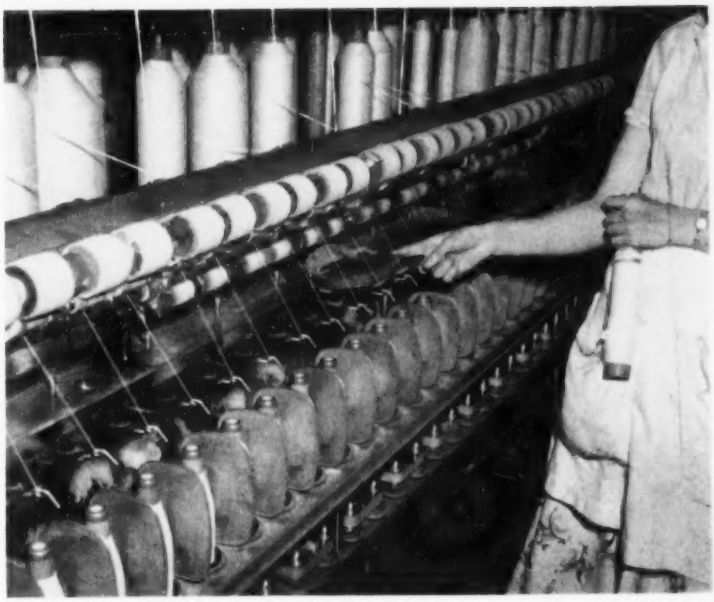
A HANDY "slide board" in use at Moultrie Cotton Mills, Moultrie, Ga., has helped reduce ends down and improve the quality of yarn by preventing lint balls and fly from becoming entangled in the yarn between the delivery rolls and the yarn guide (pigtail).

The simple device was contrived in the mill shop and consists of a small piece of wood covered on one side with a piece of clearer cloth. A piece of sheet metal is fastened to the top and bent over one side to serve as a guide. The guide is placed in the slot behind the yarn guide plate on the frame (see accompanying illustrations), and the spinner simply flips the board along with her finger as she walks beside the frame.

A small flap, made of clearer cloth, is fastened to the right side of the board to increase the reach of the clearer so it will clean underneath the drafting elements.

The slide board clearer saves time in the cleaning operation, and cleaning is done more regularly in that it is no longer a tedious job. Formerly the operative had to reach between the spinning ends by hand to mop out the lint. Furthermore, the operative is less likely to break an end down accidentally while reaching between them to clean underneath the drafting elements.

Any mill shop can make the slide boards quickly, easily, and at negligible cost. Spinners at Moultrie Cotton Mills like the slide board clearers because they made a tedious job into a simple detail. The low-cost, simple expedient also serves as a morale builder in the spinning room.



SLIDE BOARD is flipped along by the spinner as she walks beside the frame. Note relative cleanliness of entire frame.

CLEARER CLOTH is used to cover one side of board. Metal guide holds board in slot on frame.

introducing...

to the American Textile Industry

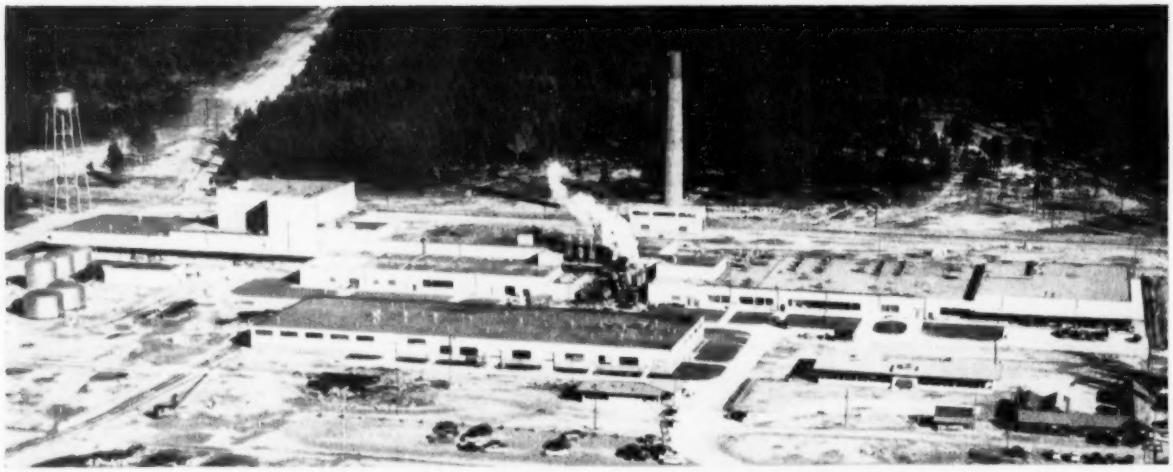
Courtaulds

the world-famous name in rayon

The newest, most up-to-date and efficient rayon staple plant in the world is now in production at Mobile, Alabama. Ultra-modern equipment that has no equal anywhere makes possible precise techniques and rigid controls which eliminate human error— a textile engineer's dream come true.

Avail yourself immediately of the benefits resulting from these latest improvements in the manufacture of viscose rayon staple.

COURTAULDS INC. • 600 Fifth Avenue • New York City



More Discussion on Evenness

Subject Briefed: CONTRIBUTOR No. *8446 described briefly his procedure in controlling evenness from picking through spinning and asked for additional discussion on the subject. (*CONTRIBUTOR No. *8446, May, 1952.)*

EDITOR TEXTILE INDUSTRIES:

The discussion on evenness by CONTRIBUTOR No. 8446 in the May issue of TEXTILE INDUSTRIES was very interesting. We established a statistical control program for our print cloth mills, which is similar to the program described in HOW OTHER MEN MANAGE.

It is not easy to exchange information on evenness because there are so many variables in methods and materials from mill to mill; however some of the fundamental facts we found in our mills may be of help.

On 58-grain finisher drawing, our one yard weighings vary with a coefficient of variation of about 1.2-1.6%.

On 1.5 hk roving, our 12-yard weighings vary with a coefficient of variation of about 1.4-1.6%.

On 30s yarn, our 120 yard weighings vary with a coefficient of variation of about 2.8-3.2%.

We found that a low variation in the weight of the finisher drawing does not necessarily mean that our yarn variation will be good. We measure the variation from yard to yard, but there is the so-called short-term variation within the yard which may become (through all the drafting in roving and spinning) long-term variation in the yarn. A condition where the drawing and roving variation of the weighings is good and the yarn variation is too high can be explained by the short-term variation in the drawing process.

Sliver from each delivery, if checked by a machine such as the Uster tester, should have an average maximum deviation of not more than 15%. We found that the weighting of the rolls in the drawing is very important with regard to short-term variation. It may be of some help to check the springs under each roll to see if all of them are standard.

I should like to know if some other readers agree with our standards for the coefficient of variation. A discussion on this subject should be of great help, and I should like to read more about the problems and approaches to solve them.

CONTRIBUTOR No. 8474

Stalls for Quill Trucks Prevent Mixed Yarn

Separate stall for each quill truck helps keep different colors and counts of yarn from getting mixed at Dunson Mills, LaGrange, Ga. A blackboard mounted over the stalls serves to show the contents of each quill truck in the stalls. Note the chalk marks on the black board in the accompanying photo. These stalls were erected by the mill carpenter. R. W. Wolfe, overseer spinning, is shown double-checking the contents of a quill truck.

Comments on Tar Spots

EDITOR TEXTILE INDUSTRIES:

Although older mill men may have heard similar remarks, I should like to make a few comments for the benefit of younger mill men. The so-called "tar spots" in finished cotton products have been of considerable interest recently, and many seem to think we get all our tar spots from highway trucks, railway cars, and similar places. I don't think our shippers are as careful as they could be about supplying clean cars; however, at least some of the trouble lies elsewhere.

At our mill we were using stick belt dressing and cake soap on our

Stehedco
and
Southern

WORLD FAMOUS TRADE NAMES OF THE
STEEL HEDDLE MFG. CO.
and SOUTHERN SHUTTLES DIVISION

2100 W. Allegheny Ave. • Philadelphia 32, Pa.

Paris, Greenville, S. C.

Manufacturers of

Flat Steel Heddles • Loom Harness Frames • Loom Reeds (Pitch Band and All Metal, Regular and Stainless Steel Wire) • Loom Harness Accessories • Automatic and Hand Threaded Southern Shuttles (Tempered Dogwood, Persimmon, and Fibre Covered) • Warp Preparation Equipment • Electrode Rods (Fibre and Plastic Insulation) • Drop Wires • Creel Stop Motions • Pigtail Thread Guides • Tension Washers • Light Metal Stampings • Hard Chrome Plating • Hard Chrome Plated Parts • Rayon Cake Holder

268 McDonough Blvd. • Atlanta 1, Ga.

STEEL HEDDLE COMPANY OF CANADA, Ltd.

310 St. Hubert Street • Granby, Quebec, Canada

STEHEDCO and SOUTHERN Products
"Weave the World's Needs"

1-O-IX

belts from cotton house to press in cloth room. When the dressing is flung from belts it is just as black as tar and difficult to remove from cotton. Take a look at the feed rolls and calender rolls on pickers and feed rolls on cards. Some will be found on lickers-in, drawing and roving frame rolls, and spinning rolls.

Many drawing rolls have been frozen from lap-ups caused by this so-called tar, but the trouble was caused by nothing but soap or belt dressing.

Soap and belt dressing are used in the gins too; therefore it is doubly difficult to stop the trouble entirely. Our mills are paying for several pounds of bagging at cotton rate, and if additional pounds are added to completely cover the bales, the cost will amount to several thousand dollars per year. I can't see that bale contamination will be entirely stopped by having the bales completely covered. Much of the so-called tar is already in the bale, and more is usually added as the cotton goes through the mill.

Back before 1900 we were troubled with tar in cotton, but belt dressing was not available and neither was soap. We obtained pine tar and beef tallow, heated the two in a bucket, and made a belt dressing of our own. The gins used this concoction too. Many gins were powered by water wheels made of wood and equipped with wood bearings and drive shafts. The gins used pine tar in the bearings and also on slides in the baling press. Yes, we had "tar spots," but they didn't come from railroads or highways. Clean railroad cars, clean truck beds, cotton covered while in transit, dispense with soap and belt dressing at gins and mills — all are required to end the tar trouble.

CONTRIBUTOR NO. 8520

Uneven Work Attributed to Poor Belt Maintenance

EDITOR TEXTILE INDUSTRIES:

Who ever heard of belts making uneven work? I have, and here is what I've learned about it. The evener motion on pickers is controlled by a belt which has a lot of moving about to do. First, we should have the best belts in service. All belts should be cut to the same length and made endless by using a good waterproof cement. An entire set of belts should be put on at one time, and a new set of belts should be kept on hand.

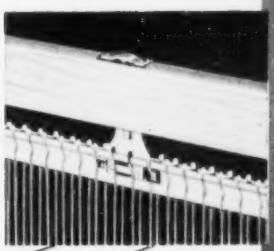
Picker belts should be watched closely because a slack belt or a tight belt really means trouble at the picker. We all want a good even lap yard-to-yard (which is more important than total weight), but you can't get good work by having tight or slack belts on eveners. Where more than one picker is in production, I like to put on a complete set of evener belts. When one gets too long or goes bad, then change the full set. Then take apart the old ones and make them all one length. These belts may be used as replacements in sets. Such a practice produces much more even work at pickers and later at cards.

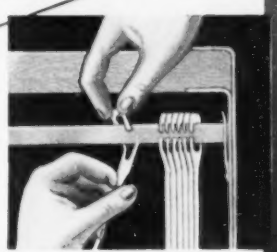
The cone belt on roving frames is an important point to exercise care regarding good belt maintenance and replacement practices. Some mills run the cone belts until they break and frame ends come down. With our new compounds on roving frames, and with good clean top rails, bobbin shafts and gears kept greased, etc., it is almost all up to the cone belts to assure good even roving. All told, the picker evener belt and roving frame cone belts do more than they get credit for. Changing belts in sets may appear to be costly at the outset, but in the long run the practice pays off in more ways than one. CONTRIBUTOR NO. 8528

Changes *are being made...*

and NOW is the Time

to change to Stehedco Drawtex Frames and Heddles





Consider the Advantages in changing over to the only original and exclusive STEHEDCO DRAWTEX FRAMES and HEDDLES for the change that gives both advantages and savings in Warp preparation.

Steel Heddle Mfg. Co., universally known for Stehedco & Southern Products that "Weave the World's Needs", in close cooperation with Barber Colman, has developed the proper harness for use with Warp drawing in equipment.

When you change your harness . . . Think of what these Exclusive Stehedco Features will mean. Freedom from Warp Streaks caused by harness. Longer Heddle Life—Fewer Seconds. Less Harness Adjustment in Looms. Greater Production and Versatility for both Heavy and Light Yarns.

Remember when changing your Harness you are changing to production of Top Quality firsts.

Consult our staff of field Engineers for full information-

Stehedco and Southern
WORLD FAMOUS TRADE MARKS OF THE
Steel Heddle
Mfg. Co.

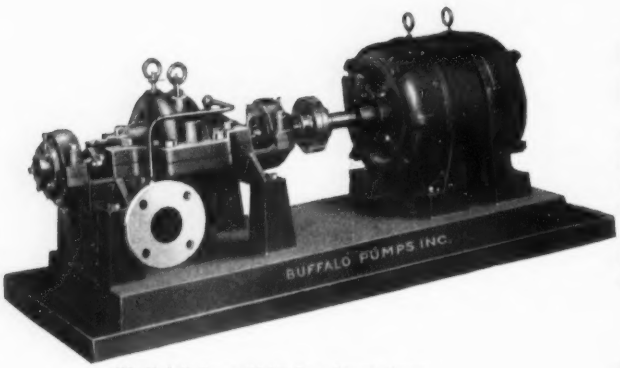
STEEL HEDDLE MFG. CO., 2100 Allegheny Ave., Phila. 32, Pa.
SOUTHERN SHUTTLES Paris Plant... Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.
STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street • Granby, Quebec, Canada

Other Plants and Offices: Greenville, S.C. • Atlanta, Ga. • Greensboro, N.C. • Providence, R.I.

-0-1

"Buffalo" Tips on Better Pumping

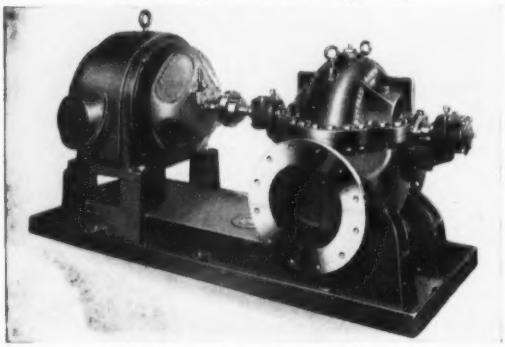
ADVANTAGES of 3 TYPES of CENTRIFUGAL PUMPS



"Buffalo" Type "RR" Two-Stage Pump

MULTISTAGE—EFFICIENT DESIGN FOR HIGH PRESSURES

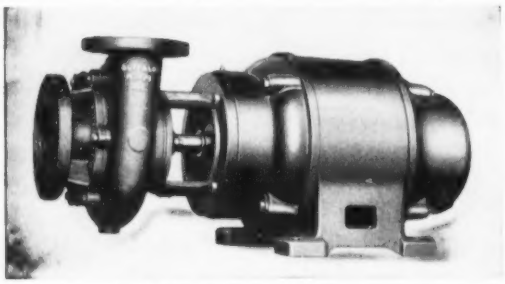
"Buffalo" builds these durable, easy-to-maintain pumps in two and four stages for heads up to 1500'. Each additional stage develops additional pressure, a highly desirable feature for jobs such as boiler feed. Impeller receives ideal support from bearings on both sides. Horizontally split shell provides quick accessibility. For further details, write for Bulletin 980.



"Buffalo" Type "SL" Double Suction Pump

DOUBLE SUCTION—EFFICIENT IN MOVING HIGH VOLUMES — IMPELLER SUPPORTED FROM 2 SIDES

Taking in clear water from both sides of its enclosed double suction impeller, this "Buffalo" Type "SL" Pump is ideally suited to handling large volumes efficiently. Correctly formed water passages and perfect hydraulic balance add to its efficiency. Bearings on both ends of oversize impeller shaft assure maximum life. Large capacity range, from 10 to 10,000 gpm, for air washers, chilled water, humidifier, general service. Write for Bulletin 955-P.



"Buffalo" Type "CCL" Pump

CLOSE COUPLED — SPACE SAVING — PERMANENT SHAFT ALIGNMENT

Available in all iron or special alloys, these husky single suction pumps are built as a unit—require no alignment during installation or afterwards. Each design—single suction, double suction, multistage—offers particular advantages. "Buffalo" builds all types, to give you the best possible pump for your job. Write for details on the full line.

"Buffalo" BUFFALO PUMPS, INC.

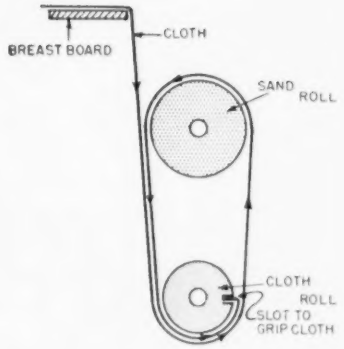
175 MORTIMER STREET BUFFALO, N. Y.

Subsidiary of Buffalo Forge Company

Canada Pumps, Ltd., Kitchener, Ont. Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

Get More Yardage on Cloth Rolls



EDITOR TEXTILE INDUSTRIES:

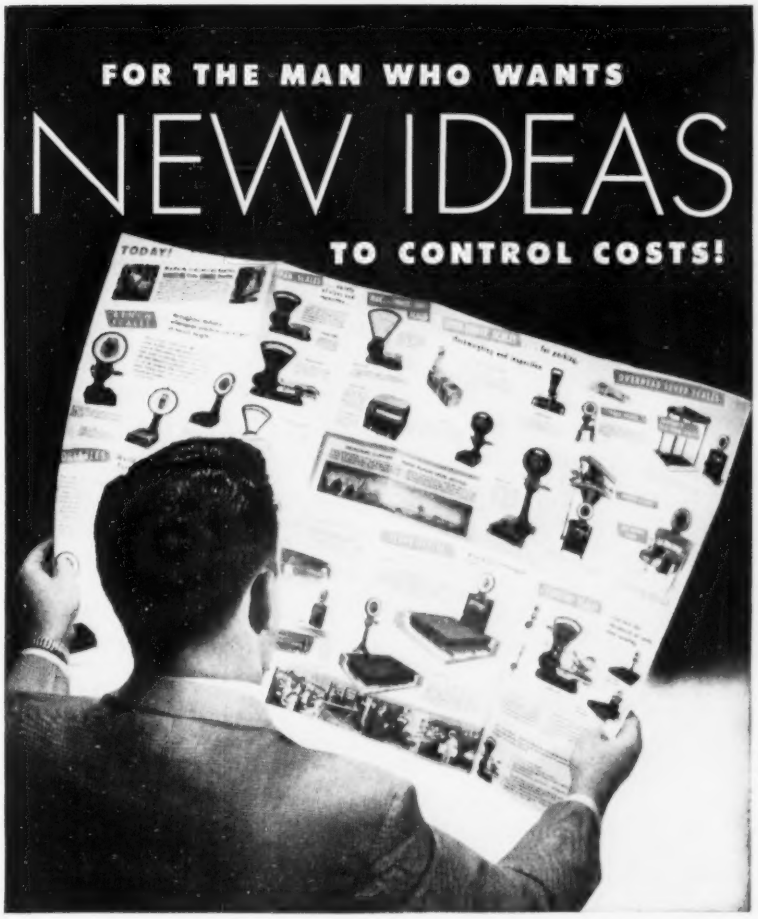
We were running a loosely woven sand crepe weave fabric containing 6s filling and 14s warp yarn on Draper XD looms. The customer wanted cuts to be 130 to 150 yards long because the cloth was to be used for printed drapes. The looms were equipped with low takeup rolls, and the best we could do with sprocket friction was 100 yards because the cloth would not roll tight enough.

Here's how we solved the problem. Removing the press roll, the cloth was threaded over the breast beam, back of the sand roll, down around the cloth roll, back up over the front, over the sand roll, and again down to cloth roll. The end was wrapped around the cloth roll and fastened in the usual way. Friction on the cloth roll was tightened, and the loom was started.

This arrangement permitted the cloth roll to wind the goods tightly, and we were able to put 150 yards of cloth on the rolls before the roll touched the sand roll.

Care has to be exercised in removing cuts; however, as soon as the operatives become accustomed to the new arrangement, little time is lost. The accompanying sketch shows how the cloth was threaded on the rolls.

CONTRIBUTOR No. 8554



...LOOK TO TOLEDO!

Whatever your problems in scales for receiving, production, shipping, stock rooms, and many other textile weighing operations . . . there's a modern Toledo to do the job with high *accuracy, speed* and *dependability.* Have you checked your scale needs? Get latest information in this widely used reference on Toledos that help you guard costs . . . speed production. Look into the advantages of Printweigh in stopping losses that originate through human errors. Send coupon for new edition—"Toledo, Headquarters for Scales."

SERVICE Factory-Trained 200 Cities

TOLEDO®
HEADQUARTERS FOR SCALES

SEND FOR THIS!

Toledo Scale Co., Toledo 1, Ohio

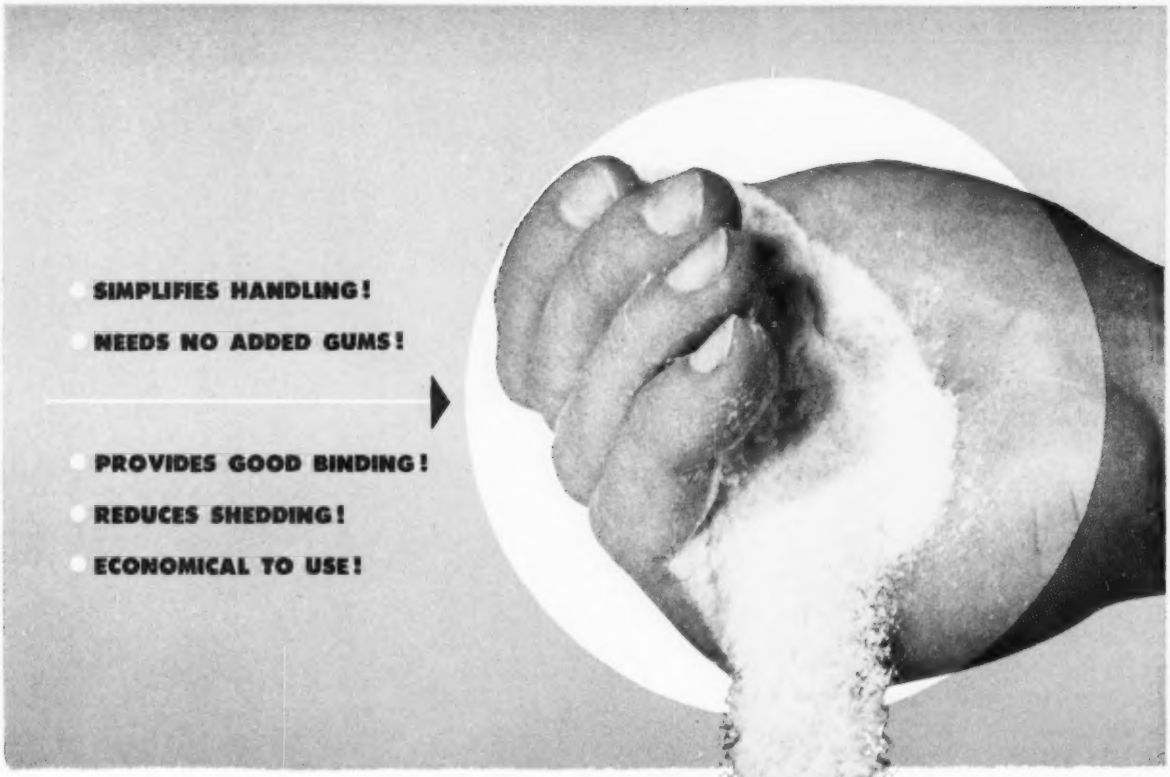
Please send without obligation your new edition on modern ways to weigh with Toledos.

Name_____

Company_____

Street_____

City_____ State_____



HOUGHTON POWDERED HOUGHTO-SIZE 475

Houghto-Size 475 is a different type of sizing agent, recently developed through Houghton research. It's an easy-to-use powder that contains all the ingredients needed in a warp size softener. This one-piece size produces a warp that weaves with maximum efficiency—and without the need for extra "builders." It has excellent binding properties—reduces shedding on both slasher and loom. Mill men tell us Houghto-Size 475 is helping them to produce better looking cotton fabrics than they ever turned out! Here's a suggestion. Order a handy fibre container of Houghto-Size 475 (about 300 pounds) and test it yourself. Or let us run a size check-up test against the method used in your mill. Ask the Houghton Man or write to E. F. Houghton & Co., Phila. 33, Pa.

HOUGHTON
TEXTILE PROCESSING
PRODUCTS
include a wide range of sizes, lubricants and oils—for cottons, woolens and synthetics. Descriptive literature will be mailed promptly upon request.

Houghto-Size 475
. . . **product of**

E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

Textile Industries

Volume 117 Number 3

MARCH, 1953

John C. Fonville
Editor

Associates

J. Frank Guest
Milton C. May
H. B. Anderson
Paul M. Platzman
22 Ridge Drive East
Flower Hill
Roslyn, N. Y.

J. A. Moody
Production Manager

John C. Cook
Business Manager

Walter M. Mitchell, Jr.
Assistant

Business Representatives

Boston—ARTHUR C. SHAW, 11 Monroe Rd., Wellesley Hills, Mass. (Phone: Wellesley 5-3648).
New York—WILLIAM K. HOFFMAN, 58 Euclid Ave., Maplewood, N. J. (Phone: South Orange 2-2484).
Philadelphia—RODMAN HANSON, 708 Hendren St., Philadelphia 28, Pa. (Ivy Ridge 3-4176).
Chicago—MAYNARD L. DURHAM, 333 North Michigan Ave., Chicago 1, Ill. (Phone: Central 6-6964).
Cleveland—A. E. C. SMITH, 609 Caxton Bldg., Cleveland 15, Ohio (Phone: Cherry 1-7352).
Pittsburgh-Buffalo Area—J. D. PARSONS, 23 Border St., Cohasset, Mass. (Phone 4-0712).
Charlotte—W. CLIFF RUTLAND, Box 102, Gastonia, N. C. (7995).
Los Angeles—L. B. CHAPPELL, 6399 Wilshire Boulevard, Los Angeles 48, Calif. (Webster 3-9241).
England—V. DELPORT, 2 Caxton Street, Westminster, London, S.W. 1, England.
Continental Europe—HARRY BECKER, 111 Thorley Lane, Timperley, Cheshire, England.

Published Monthly at 115 E. Gordon
Dalton, Ga.

by W. R. C. SMITH PUB. CO

W. J. ROOKE—*President*
R. P. SMITH—*Exec. Vice-Pres.*

Editorial and Executive Offices

806 Peachtree St., N.E., Atlanta 5, Ga.
Telephone: Atwood 4462

ANNUAL SUBSCRIPTION
U. S., CANADA, PAN-AMERICA—$2.00
FOREIGN—$5.00

Copyright, 1953, by
W. R. C. Smith Publishing Co.

Member of
Audit Bureau of Circulations
National Business Publications

These popular extra-handy

RIDGID

drop head dies

give you clean threads fast and easily

★ Small, well balanced, clean cutting, these popular RIDGID ratchet threaders are a pleasure to work with. They save you time and effort because heads snap into drive ring from either side, won't fall out. Precision-cut alloy dies reverse for close-to-wall threads—no special dies needed.

★ 00R and 0R, ¼" to 1"; 111R and 11R, ⅛" to 1¼"; 12R, ⅛" to 2". Conduit dies, too—and free carrier with sets. Buy them at your Supply House.

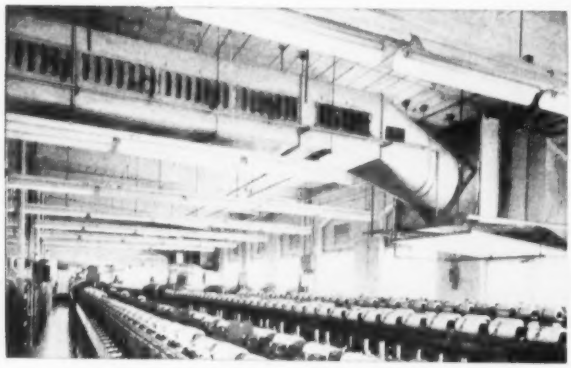
THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools

Parks-Cramer

CERTIFIED CLIMATE

YOU know the value of closely controlled atmospheric conditions in the textile mill. OUR object is to design the best possible air conditioning apparatus and to recommend the system most suited to your requirements.



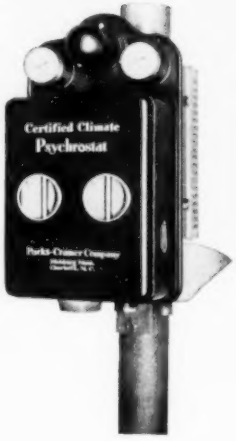
Automatic Airchanger—unit or central type.

Gradumatic Humidification.

Air Washer System—central station or ceiling type—straight or in combination with direct humidification or refrigeration.

Each system flexible and of dependable capacity.

All with Gradual Acting Psychrostat Regulation.



Engineering, manufacturing, installing by Parks-Cramer.
Complete new installations. Modernizing of existing systems.
Centralized responsibility.
Textile mill humidification and air conditioning since 1906.

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C.

News in Brief

(Continued from page 77)

night a week to the study of your business, and (4) have the initiative to try out new ideas.

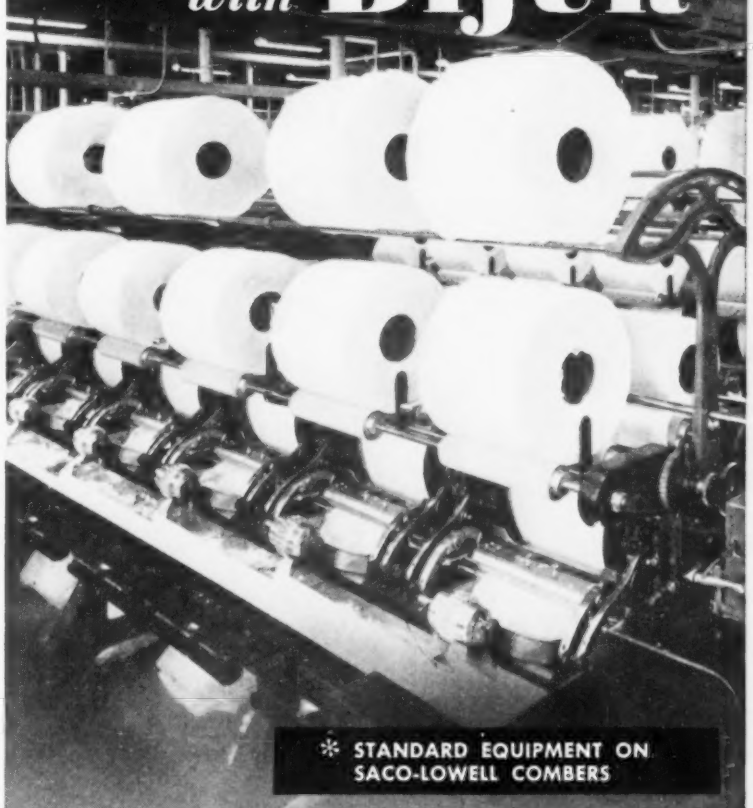
Aid to Italian Textiles. The Italian National Textile Center provides the Italian industry with a documentation service which offers information of technical and scientific developments. A monthly condensation of articles from journals and papers is circulated.

Denim Too Strong. A new denim fabric which has filling made of combed cotton and nylon is actually stronger filling-wise than warp-wise. Another manufacturer who tried a nylon blend in denim found that the fabric lasted so long under tests that it might considerably reduce the market for the product.

Burlap Consumption Up, Prices Down. In 1952 the U. S. consumption of burlap from India increased 55% over 1951, during which time prices dropped to a six-year low.

On Services and Margins for Textiles. Technical Bulletin No. 1062 titled "Marketing and Manufacturing Services and Margins for Textiles," by L. D. Howell, is now available from the United States Department of Agriculture, Washington, D. C. Price is 60¢ per copy.

NO LOST PRODUCTION with BIJUR*



* STANDARD EQUIPMENT ON SACO-LOWELL COMBERS

With *controlled* lubrication, SACO-LOWELL COMBERS operate at high efficiency — 168 bearings lubricated *automatically* — with the *right* quantity of oil, at the *right* time — *while the machine is running* — with no spotting of the fine product by excess oil.

Specify Bijur Automatic Metered Lubrication — guard hard-to-reach, forgotten bearings on all types of machines — provide *longer machine life — lower maintenance — increased production at higher speeds.*

Consult a Bijur engineer — the *expert* on all machine lubricating problems.

N-2

BIJUR
LUBRICATING CORPORATION
Pioneers in Automatic Lubrication
Rochelle Park, New Jersey

246

U. S. Textile Machine Company presents to Face Drive Twister customers

THE ANSWER TO BETTER YARN QUALITY WITHOUT REDUCING TWISTING SPEEDS!

attention:

FACE DRIVE TWISTER CUSTOMERS

Run at high spindle speeds and get even better quality yarn with new, precision balanced wind, bottle type supply spools from the new Vertical Spooler!

U.S. ACME

Now... NEW HIGHER SPOOLING SPEEDS

VERTICAL SPOOLER

with PACKAGES THAT MINIMIZE BROKEN FILAMENTS without reducing twisting speeds!

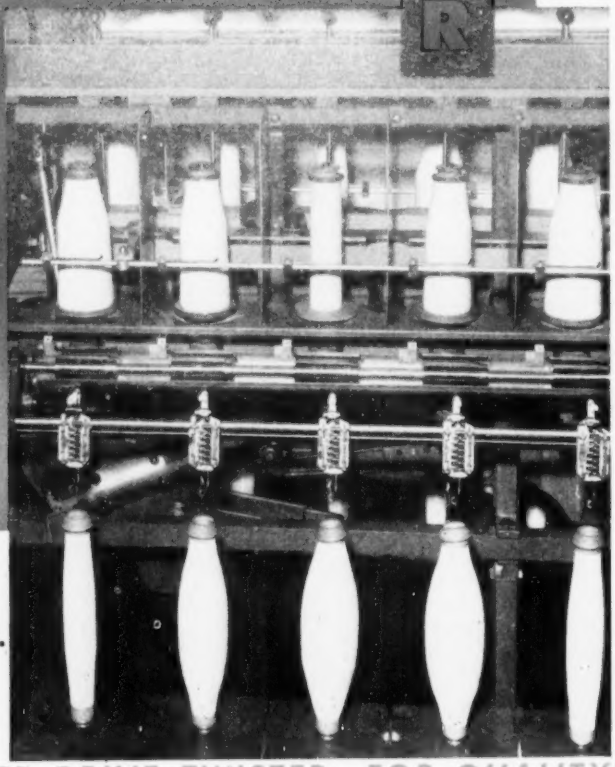
NEW TYPE!

BOTTLE WIND SPOOLS

improve yarn quality by minimizing broken filaments in twisting operation

SPOOL, CLEAN & OIL *IN ONE HIGH SPEED OPERATION*

MORE SPINDLES IN LESS FLOOR SPACE



Let's talk over your spooling requirements . . . write, phone or wire for complete data.

U. S. TEXTILE MACHINE CO.

SCRANTON 8, PENNA.

SERVICE AT THE TIME OF PURCHASE ... SERVICE OVER THE YEARS!

VERTICAL SPOOLER PLUS FACE DRIVE TWISTER—FOR QUALITY!

What the TEXTILE MILLS are doing

A $2,000,000 plant near Seneca, S. C., is being built by the **Abbot Worsted Co.,** Graniteville, Mass. It will have 100,000 sq ft floor space, be totally enclosed with glazed tile, completely air-conditioned, and equipped with the latest machinery.

Ames Textile Corp. has merged with the **Ames Worsted Co.,** the new corporation to be known under the former name. No changes in personnel or methods of operation are planned.

Allan Yarn Mills, Inc., headed by Arnold and Moe Schneider, has been organized to operate a mill near Lenni Mills, Pa.

Additional twisting equipment has been bought by **American Silk Mills, Inc.,** to increase its production of fabrics of boucle yarns.

Angelica Knit Fabrics, Inc., has changed its name to **Winkler Knit Fabrics, Inc.** Max P. Winkler is president.

Burlington Mills, Inc., has under construction a two-story addition to its plant at Reidsville, N. C.

Callaway Mills Co. employees at Milstead, Ga., have been raising funds toward a health clinic for Rockdale County, initiated by the Callaway Community Foundation's offer of $40,000 if the same amount could be raised from other sources. All contributions were not in the form of money; one woman offered five hens, which were promptly accepted.

Coated Industries, Inc., was recently chartered to operate a processing mill for production of coated textile fabrics. George Knopp, 165 Broadway, New York, N. Y., is attorney and representative.

J & P Coats, Inc., Pawtucket, R. I. and **Clark Thread Co., Inc.,** Newark, N. J., jointly owned for some time, have now merged in a new company, known as **Coats & Clark, Inc.** No changes in personnel are anticipated.

Essex Dyeing & Finishing Works, Inc., has taken over **Patchogue (N. Y.) Dyeing & Finishing Works,** a division of Patchogue Plymouth Mills Corp.

Clarence L. Whisnant and Paul C.

METLKOR®

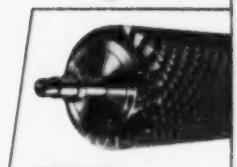
THE "NATURAL" BRUSH FOR SYNTHETICS

SHEAR RAISING

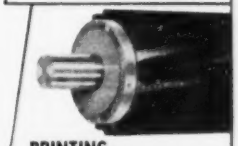
When the synthetics industry blossomed forth some 25 years ago, M. W. Jenkins' Sons brought their considerable experience to the industry. Having designed brushes for textiles since 1877 and keeping abreast of technological advances, M. W. Jenkins' Sons then and since developed a series of brushes specifically designed to meet the new and challenging problems presented.

As with all its products, whether for the textile or other industries, Jenkins' METLKOR brushes for synthetics are the best available. They will not sag, split, crack or get out of alignment, are uniformly tufted, filled, trimmed and spaced to give uniform performance. Set in flat wire, they are wound about a permanent metal core which can be rebristled with the same or any other desired bristle.

For any problem requiring brushes, M. W. Jenkins' Sons is prepared to supply a standard or special brush to meet your need.



FURNISHER



PRINTING BLANKET WASHER

PRINTING BLANKET DRIER

OTHER METLKOR BRUSHES FOR SYNTHETICS:

BRUSHING MACHINE CARDING
BRUSHING PRIOR TO PRINTING

M. W. JENKINS' SONS, INC.

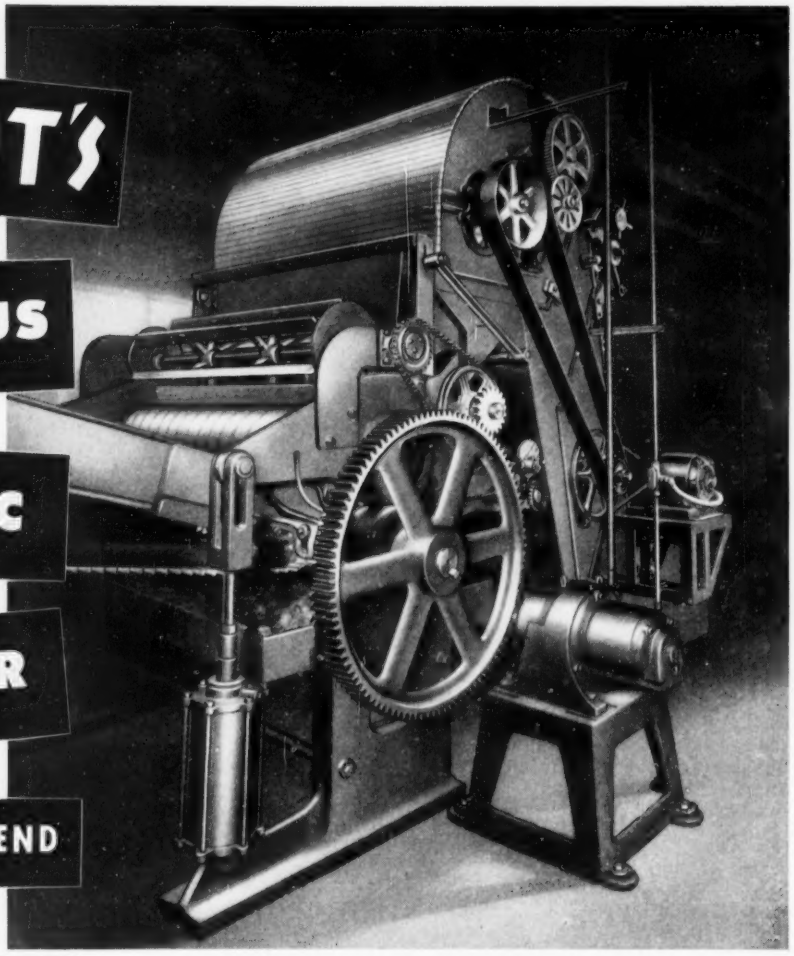
Three-Quarters' Century of Pioneering Brushes for Industry

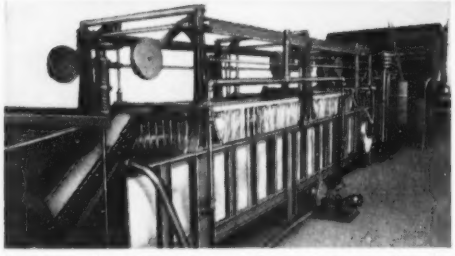
Cedar Grove, Essex County, New Jersey

SARGENT'S

CONTINUOUS AUTOMATIC EXTRACTOR

ANY FIBRE—ANY BLEND





SARGENT'S Washer-Extractor-Dryer train — for the utmost in fibre safety, coupled with top quality, speedy, continuous production. Illustrated are SARGENT'S all-stainless steel Washer for scouring, bleaching, acidifying, the Feed and Extractor, and SARGENT'S Single Apron Dryer.

SINCE 1852

May We Send You...
more details about this modern production unit? Write us, and ask for your copy of Extractor Bulletin No. 189

THE MOST MODERN AND EFFICIENT EXTRACTING SYSTEM YET DEVISED FOR REMOVING EXCESS LIQUIDS AND DYES

Unit consists of SARGENT'S continuous, automatic feed and pneumatic squeeze roll machine with ball-bearing rollers and patented tension control feature. Delivers up to 10 tons pressure when needed. Individual vari-speed motor drives. Stainless steel or other anti-corrosive metals throughout. Moisture content of stock reduced to 37% or less, enabling dryer to do better, speedier, more economical work. Even, continuous web of full-length, soft, unbroken fibres facilitates quality production in all later processes.

Three sizes — 36" rolls, 50" and 60", or to meet your needs. The 50" unit, illustrated, has in actual production tests delivered 3200 pounds of dyed wool per hour.

C. G. SARGENT'S SONS CORP.
GRANITEVILLE, MASSACHUSETTS, U.S.A.

• • •

REPRESENTATIVES: F. E. WASSON, 519 Murdock Rd., Philadelphia 19, Pa.
A. L. MERRIFIELD, 215 Grove Ave., Cincinnati 15, Ohio
W. S. ANDERSON, Carolina Specialty Co., Charlotte, N. C.
HUGH WILLIAMS & CO., 47 Colborne St., Toronto 1, Canada

What the TEXTILE MILLS are doing

Shipman are principal incorporators of **Fairview Hosiery Mills, Inc.,** Hickory, N. C., manufacturers of women's hosiery.

Carolet Corp., Jewett City, Conn., recently organized by William Whitman Co. to take over and operate the printing and finishing mills of Aspinook Corp. in Jewett City and Adams, Mass., is planning an expansion program at both plants for increased production.

A one-story mill, with about 14,000 sq ft of floor space, is under construction by **Glass Fabrics Finishing Co.,** Cedar Grove, N. J. It will be used for printing and finishing of a new line of fiber glass textiles.

New 66-gauge full-fashioned hosiery machines have been installed at the mill of **Hoburt Hosiery Corp.,** Denton, N. C., for increased production.

Howard Knitting Mills, Inc., was recently organized for manufacture of outerwear. Vincent Lolardo, 244 Williams St., New York, N. Y., is attorney and representative.

A new unit to be equipped as a dyeing and finishing department, another structure for warehouse service, and a new boiler house, are under construction by **A. & M. Karagheusian, Inc.,** as additions to the building it purchased at Albany, Ga.

The recently chartered **Lawrence (Mass.) Wool Scouring Co., Inc.,** has leased a one-story building to be equipped for commission scouring, sorting, and grading. Francis C. Rohmer, 65 Mt. Vernon Ave., Needham, Mass., is president and representative.

The mill and property of **Howland Croft Sons & Co., Linden Worsted Mills,** Camden, N. J., have been sold at public auction.

McComb (Miss.) Manufacturing Co., Inc., has a one-story addition to the plant under construction, to be equipped as a yarn-twisting mill.

Macon (Ga.) Textiles, Inc., an interest of Bachmann Uxbridge Worsted Corp., has installed additional wide looms and auxiliary equipment for increased production.

HOW TO GIVE YOUR FLOORS A FUTURE

(Above) Dark oil-soaked floor maintained by scrubbing. (Right) Similar area, same dirt conditions, but TENNANT dry-cleaned.

An example of results you can get with the

TENNANT *System* OF FLOOR MAINTENANCE

To be SURE of bright, easy-to-clean floors in your mill—both now and for *years* to come—no other maintenance method is more effective than the TENNANT SYSTEM.

It not only reconditions dark, spongy, water-softened floors . . . it restores original brilliance . . . hardens, seals and *protects* against dirt and traffic . . . cuts cleaning costs.

KEEPS FLOORS BRIGHT by fast mechanized dry cleaning. Eliminates scrubbing.

MAKES FLOORS EASY TO CLEAN. Dirt cannot readily adhere to smooth-sealed floors. Wipes off easily.

CUTS MAINTENANCE COSTS by saving manhours. Floors clean up like magic and stay clean much longer than when scrubbed. Floors stay dry, hard, lustrous; reduces slip hazards.

G. H. TENNANT CO.
2524 North Second Street
Minneapolis 11, Minn.

Write today!
Get typical case histories, photos, and NEW bulletin "How to Get Better Results In Textile Floor Maintenance."

TENNANT FLOOR MAINTENANCE *System*

Established 1870

OFFICES IN PRINCIPAL CITIES

What the TEXTILE MILLS are doing

Maple Spinning Mills, Inc., West Sand Lake, N. Y., was recently organized for manufacture of woolen and blended yarns.

Massachusetts Mohair Plush Co., Lowell, Mass., has been acquired by new interests, headed by George and Ernest Horvath. J. E. Duval remains as president.

The **Selma (N. C.) Cotton Mills** have been purchased by **Millville (N. J.) Manufacturing Co.** and will be operated as **Selma Mills, Inc.**

The offices and plant of **Natlie Knitting Mills** have been moved to 36-38 Margaret Street, Hamilton, Ontario.

New England Print & Dye Works, Freetown, Mass., were recently chartered for treating, printing, and finishing of silks, rayons, and other fabrics. L. F. Jordan, Mamaroneck, N. Y., is president. Johannes H. Lutjens, 1430 Midland Ave., Bronxville, N. Y., is treasurer and representative.

Newton (N. C.) Knitting Mills, Inc., has been acquired by new interests, headed by R. S. Dickson, Charlotte, N. C.

Powdrell & Alexander, Inc., is consolidating weaving operations in its Gosnold Division mills at New Bedford, Mass. One of its mills at Danielson, Conn., has been sold to Arawana Mills, Inc., Danbury, Conn.

Redman Process Knit Outerwear, Inc., was recently organized for manufacture of outerwear. Susan Adelsohn, 1450 Broadway, New York, N. Y., is attorney and representative.

Regent Hosiery Co., Inc., has been chartered to operate a knitting mill. Joseph A. Mackey, 10 Weybossett St., Providence, R. I., is attorney and representative.

A one-story addition to the mill has been constructed at **Rittenhouse Hosiery Mills, Inc.,** Boyertown, Pa., and new knitting machines and auxiliary equipment have been installed.

Rockwood (Tenn.) Mills, Inc., has a modernization and improvement program under way, which includes installation of additional knitting machines and accessory equipment.

Runnymede Mills, Inc., Tarboro, N. C., has arranged for a $150,000 loan, part of which will be used for purchase of machinery to replace old equipment.

120 additional looms have been installed in the Hartwell, Ga., plant of **Textron Southern,** the second expansion program since the plant went into production in 1949.

Sulloway Hosiery Mills, Inc., Franklin, N. H., formerly producers of full-fashioned hosiery for men and women, is now concentrating production on seamless hosiery.

Wilton (Me.) Woolen Co. has purchased the real estate and certain machinery of Winthrop (Me.) Mills, Inc., and is operating it as a branch mill, concentrating on automobile upholstery.

Eighteen Argyle solid color pattern knitting machines and auxiliary equipment have been installed at **Wright Knit Hosiery Mill, Inc.,** Spruce Pine, N. C.

Plans are under way for construction of a new mill by **Worcester (Mass.) Woven Label Co.**

NON-FLUID OIL

TRADE MARK REGISTERED

Stops Black Yarn

Unlike ordinary oil, NON-FLUID OIL does not creep from roll necks to spread out over roll covers and aprons. Blackened yarn is eliminated and roll covers and aprons last much longer because oil rot is prevented.

Seven out of 10 mills get increased production by using NON-FLUID OIL. They have assurance of trouble-free lubrication and a reduction of lubricant and application costs because NON-FLUID OIL outlasts ordinary oil 3 to 5 times.

Why not obtain these benefits for your mill? Let us send you a generous sample for your own test to prove these claims. No obligation of course. Write for Bulletin T-13 and free testing sample of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE. NEW YORK 17, N. Y.
WORKS NEWARK, N. J.

Southern District Manager: Lewis W. Thomason, Jr.
Charlotte, N. C.

WAREHOUSES

Atlanta, Ga.	Detroit, Mich.
Birmingham, Ala.	Greensboro, N.C.
Charlotte, N.C.	Greenville, S.C.
Chicago, Ill.	Providence, R.I.
Columbus, Ga.	St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

Personal NOTES

ABOUT MEN YOU KNOW

J. G. Lecrone has transferred from Abercyle Manufacturing Co.'s Guelph, Ontario, plant to the firm's Bridgeton, N. J., plant, of which he is now manager. He succeeds **A. S. Wilson, Jr.**, assigned to the Philadelphia office.

A Washington, D. C., section of the American Association of Textile Chemists and Colorists was recently organized with **Milton Harris**, Harris Research Laboratory, as chairman. Other officers are: vice-chairman, **Henry D. Barker**, Department of Agriculture; secretary, **George S. Buck, Jr.**, National Cotton Council; treasurer, **H. E. Ehrman**, Department of Commerce; and counsellor, **Walter M. Scott**, Department of Agriculture.

New president of the American Association of Textile Technologists is **Walter E. Scholer** of American Viscose Corp. **Stephen J. Kennedy** of the Office of the Quartermaster General was made an honorary member. **Erb N. Dilton**, Gotham Hosiery Co., was elected first vice-president, and **Gerard K. Lake**, Burlington Mills Corp., was made second-vice president. Other officers were re-elected.

James H. Martin, general superintendent of the manufacturing division, assumes the same duties with the Efird Division of American & Efird Mills, Albemarle, N. C. **Edward W. Blackwood**, formerly superintendent of the Adrin and Madora plants in Mount Holly, has been made assistant general superintendent of that division; **M. L. Rogers** has been promoted to plants manager; and **Wells Rogers** has replaced him as superintendent of the division.

Charles H. Silver has retired as vice-president of the American Woolen Co. after fifty years in the woolen and worsted industry.

O. Timberlake, formerly with Hancock Mills, Inc., is now general manager at Artweave Fabrics, Paterson, N. J.

Carl Deglialberti, acting director research and development division, U. S. Navy Clothing Supply Office, has been appointed supervisor of the textile unit, City College Midtown

INVESTIGATE

Tower

TEXTILE EQUIPMENT

SLASHER EQUIPMENT

High speed production is the keynote of Tower Slasher Equipment. Warp sizing costs are reduced. Uniformity in both the sizing of yarn and the winding of loom beams is assured by these modern TOWER units. Advanced size box designs and complete instrumentation give quality control at all speeds. Turned and polished rolls, anti-friction bearings throughout and welded steel frames maintain perfect alignment at continuous high speed operation. Multi-motor drive precisely controls tension and stretch from creel to loom beam.

Southern Representative
IRA L. GRIFFIN AND SON
P. O. BOX 1576
CHARLOTTE, NORTH CAROLINA

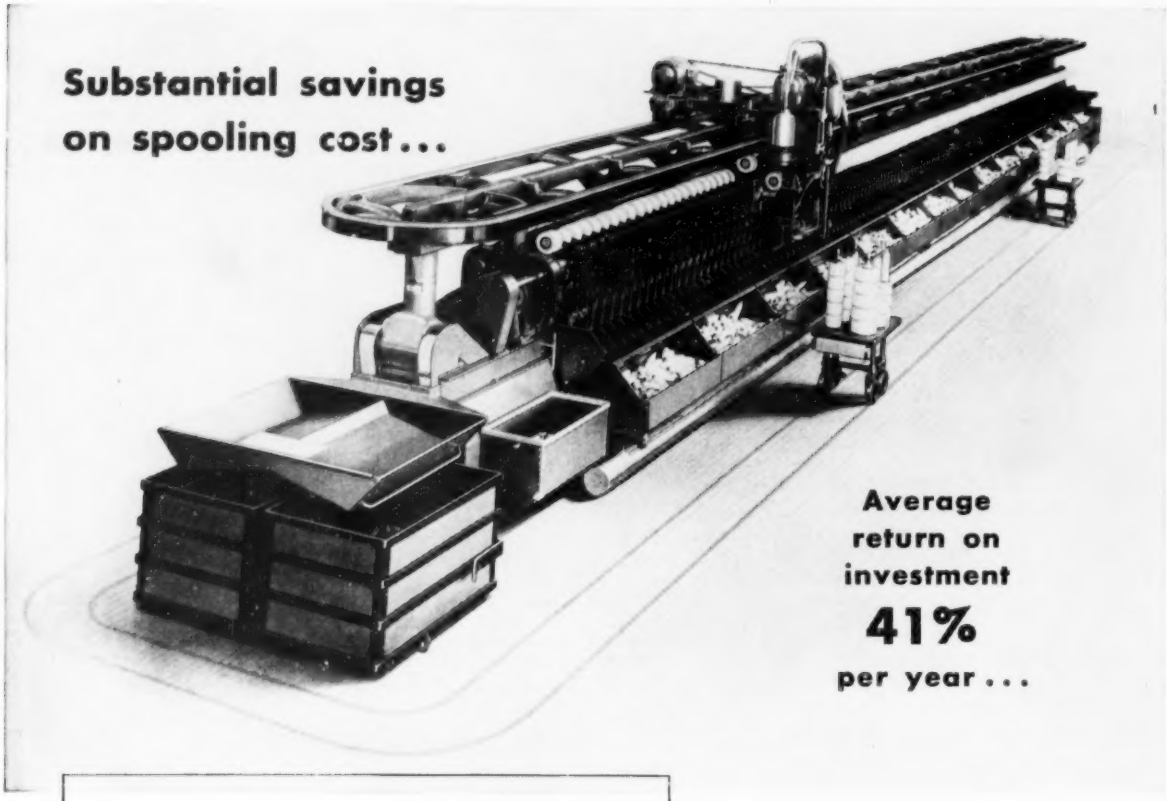
Northern and Canadian Representative
LINDER AND COMPANY, INC.
296 NORTH BEACON STREET
BOSTON, MASSACHUSETTS

Tower Iron Works

Established 1835

50 BORDEN STREET, PROVIDENCE 3, RHODE ISLAND

Substantial savings on spooling cost...



Average return on investment 41% per year...

Barber-Colman
AUTOMATIC SPOOLER

SPOOLERS AND WARPERS IN USE ABROAD

COUNTRY	SPOOLERS	WARPERS
Argentina	5	4
Columbia	8	8
England	41	28
France	48	21
Germany	38	22
Holland	16	13
India	12	10
Italy	15	7
Japan	10	9
Mexico	14	9
Sweden	10	7
Eight other countries	27	20
TOTAL	244	158

You can see from the above figure that the machine, which cuts spooling costs very materially, can pay for itself in about two and a half years. There are other benefits, too. By use of this machine, and its associated Super-Speed Warper, practically all spooler kinks are eliminated, weaver's knots are obtained, and the elasticity of the yarn is retained — all of which are of great benefit in the weaving. Also, loom stops, in a nine-year test, were shown to decrease by 25.44% and the average increase in weave room production was 1.25%. Since their introduction 30 years ago, Barber-Colman machines have earned very wide acceptance in the American textile industry . . . now their use (see list) is rapidly spreading into other textile-manufacturing countries.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. — GREENVILLE, S. C., U.S.A. — MANCHESTER, ENGLAND — MUNICH, GERMANY

INDIA
Batliboi & Company
Forbes Street, Fort
Bombay, India

MEXICO
J. Rabasa
Isabel la Catolica 45-813
Apartado 7348
Mexico D.F., Mexico

BRAZIL
Quimanil S.A. Anilinas
e Representacoes
Rua Gilcerio 537/547
Caixa 5658 e 3431
Sao Paulo, Brazil

JAPAN
Nippu Trading Co., Ltd.
Toa Koshin Bldg.
3-Chome Kitahama Higashiku
Osaka, Japan

MIDDLE EAST
Arlind Corporation
65 Bedford Street
Stamford, Connecticut

Personal NOTES
ABOUT MEN YOU KNOW

Business Center, New York City.

Manuel Sanders has retired as night superintendent of Clinton (S. C.) Cotton Mills, after 20 years of service. He is succeeded by **D. O. Freeman,** formerly of Spartanburg.

Dr. L. H. Hance has been elected executive vice-president of the Institute of Textile Technology, and

Dr. Hance

will assume the office of president in September, succeeding Dr. J. L. Vaughan, who is returning to his duties at the University of Virginia.

The South Central Section, American Association of Textile Chemists and Colorists, recently announced the following newly elected officers: chairman, **E. E. Burgner, Jr.,** Davenport Hosiery Mills; vice-chairman, **P. O. Anderson,** Peerless Woolen Mills; secretary, **Joe T. Bohannon,** American Aniline Products; and treasurer, **W. F. Luther,** Dixie Mercerizing Co.

Clarence R. Spece, formerly personnel manager of the three Rhode Island plants of Collins & Aikman Corp., is now assistant manager of Plant J, recently reactivated weaving plant in Bristol, R. I.

Recently elected to membership in the Controllers Institute were **Norman T. J. Naylor,** Ponemah Mills, Inc.; **E. Robert Balderson,** Steel Heddle Manufacturing Co.; and **Roy G. Zimmerman,** Munsingwear, Inc.

John D. MacLaughlan, Jr., was recently appointed administrative assistant to the executive vice-president of Dan River Mills, Inc. New night superintendent of the finishing division is **Roy E. Beauregard,** formerly with Acabado Loudress Co. of Mexico.

Russell B. Newton has joined Deering, Milliken & Co., Inc., as

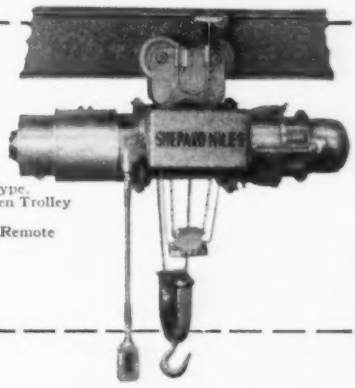
SOLVE MANPOWER PROBLEMS with a SHEPARD NILES Electric Hoist

● One man replaces many—and moves more goods faster—with a Shepard Niles Electric Hoist! These rugged hoists free floor space for production, put waste ceiling area to work. They enable an older man, woman or youth to handle heaviest loads with ease.

Learn how a Shepard Niles Hoist—in light, medium or heavy capacity—fits into your production picture. Call in the Shepard Niles representative—he'll help you select the right capacity and controls for your handling job.

2 FAMOUS HOISTS

Heavy Duty SHEPARD NILES Hoist

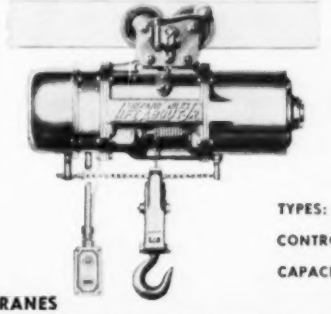


TYPES: Lug Suspension, Hook Suspension, Base Type, Push Trolley, Geared Trolley, Motor-driven Trolley

CONTROLS: Pendant Rope, Push Button, Outrig, Remote

CAPACITIES: 500 to 40,000 lbs.

SPEEDS: To meet your requirements—Write for latest bulletins.



Light Service, Low-Cost LIFTABOUT JR.

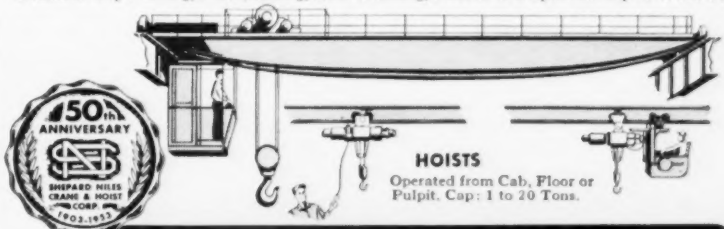
TYPES: Lug Suspension; Hook Suspension; Push Trolley

CONTROLS: Single Speed; Push Button; Rope Operated

CAPACITIES: 500, 1,000 or 2,000 lbs. Write for latest bulletins.

CRANES

Overhead: Top Running, Inner Running, Under Running, Floor or Cab Operated. Cap: 1 to 450 Tons.



50th ANNIVERSARY SHEPARD NILES CRANE & HOIST CORP. 1903-1953

HOISTS

Operated from Cab, Floor or Pulpit. Cap: 1 to 20 Tons.

SHEPARD NILES CRANE AND HOIST CORPORATION

1926 SCHUYLER AVENUE, MONTOUR FALLS, N.Y.

"Got a heavy date with a SHUT-DOWN!"

HUFFMAN-WOLFE BRINGS A *New Service* TO YOUR INDUSTRY

Shut-downs, break-downs and cut-overs . . . this "headache" of industry can now be reduced to a minimum! Backed by more than half a century of experience, HUFFMAN-WOLFE can supplement your engineering and maintenance staffs to reduce, and in many cases even eliminate, this down-time.

At convenient locations throughout the entire Southeast, experienced crews stand ready to answer your call. Let us show you how, through a coordinated effort, costly down-time can be prevented with this new HUFFMAN-WOLFE service.
For additional information, write, wire or phone today.

"Torchy" and "Lockjaw" famous symbols of Huffman-Wolfe experience and capability.

the HUFFMAN-WOLFE Company

MECHANICAL CONTRACTORS
ATLANTA, GEORGIA

P. O. Box 1248
Telegraph WUX
Telephone LAmar 7726

SERVING INDUSTRY
SINCE 1850

Textile Industries

America's
LEADING
Textile
Journal

WORKS CLOSELY
WITH MANUFACTURERS
AND MILLS IN DEVELOPING
U.S. TEXTILE EFFICIENCY

Manufacturers, as well as mills, have contributed a full share to the building of the U. S. Textile Industry which today produces the major portion of the world's textile products.

TEXTILE INDUSTRIES has cooperated with manufacturers in featuring articles and literature on products of interest to textile men. T. I. was first in the field to feature a permanent listing of manufacturers' literature and first to summarize new equipment in an annual special issue.

We believe that mill men appreciate this service, since we received over 10,000 requests for additional information on this type of editorial matter in 1952.

Take a look at these services in this issue. They offer a ready reference to machinery equipment and supplies for more efficient production.

Textile Industries

W.R.C. SMITH PUBLICATIONS

ABC - NBP
806 P'tree St., N.E.
Atlanta 5, Ga.

Personal NOTES ABOUT MEN YOU KNOW

president of the Deering, Milliken Research Trust. He was formerly president of Dan River Mills, Inc.

Radley Sheldrich has succeeded J. C. Cameron as superintendent of George E. Duffy Manufacturing Co., Worcester, Mass.

John E. Reeves, formerly vice-president and treasurer, has been made executive vice-president and treasurer of Reeves Brothers, Inc.

Mr. Reeves

S. L. Lewis, Jr., previously vice-president and general sales manager, is now vice-president in charge of sales.

Hunter R. Hughes, formerly associate editor of TEXTILE INDUSTRIES with headquarters in the Carolinas, has accepted the position of editor of "Consulting Engineer," a new magazine, and editorial director of "Industry and Power," which has been in existence for a number of years. Both magazines are published by the Industry and Power Publishing Co., St. Joseph, Mich. Before joining the staff of TI, Hunter was associate editor of "Southern Power and Industry," a monthly magazine of the W. R. C. Smith Publishing Co., also publishers of TEXTILE INDUSTRIES.

Recently promoted at the Fieldale mills of Fieldcrest Mills were: **William H. Richardson, Jr.,** senior engineer for the Towel and Hosiery Mills in the standards department; and **Sam R. Thomas,** foreman of the Towel Mill sewing department.

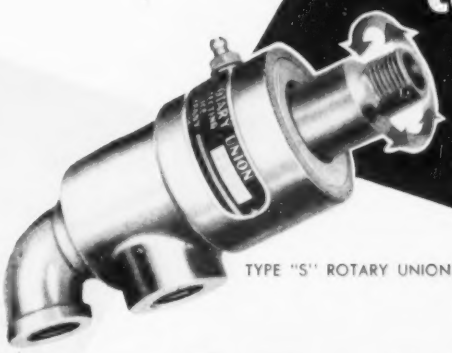
James B. Hemil has joined the engineering division of Fulton Bag & Cotton Mills, and will assist in the coordination of plant engineering. He was previously with Brumby Metals, Inc.

David H. Roberts was recently appointed superintendent of Lydia

ROTARY UNION
(REG. TRADE MARK)

a revolving steam connection

PIPE SIZES 1/4" THROUGH 3"



TYPE "S" ROTARY UNION

Better 5 Ways

1. LOW MAINTENANCE COST. The ROTARY UNION is *guaranteed* to give one year's ordinary service without tightening or adjusting of any kind . . . and many have run three years or more without requiring such service.
2. LOW OPERATING COST. Accurate records show that the ROTARY UNION uses from 20% to 30% of the electrical current usually required.
3. NO DOWNTIME FOR ADJUSTMENTS. Many ROTARY UNIONS have been operating for years without causing one minute's downtime.
4. POSITIVE MECHANICAL SEAL ALL THE TIME. Self-adjusting to pressure of application.
5. LOW INITIAL COST. Despite its many advantages, the ROTARY UNION costs about the same or less than ordinary steam joints . . . and requires less than 15 minutes to install. Long trouble-free service pays big dividends thereafter.

Try ROTARY UNIONS on one of your dry cans, calenders, slashers, or printing or coating machines, and you will adopt them for all of your equipment.

Contact our nearest office or write Dept. 3T for our catalog.

"Where *Good Connections* Count"

PERFECTING SERVICE COMPANY

332 Atando Avenue (Home Office and Factory) Charlotte, N.C.

Atlanta, Chicago, Cleveland, Philadelphia, Providence, New York, Montreal, Toronto

For further information use Handy Return Card, Page 200

Personal NOTES
ABOUT MEN YOU KNOW

(S. C.) Cotton Mills. He was formerly with Spartan Mills.

The new chairman of the manufacturing trade group of the National Industrial Council is **Merrill A. Watson,** president of the Carpet Institute, Inc.

W. O. Bryant succeeds Buren Henderson, resigned, as resident superintendent of Kingston Mills, Cartersville, Ga.

A. M. Smyre Manufacturing Co. has announced the promotion of **D. Hunter Cauble** to general superintendent. **Lester H. Whitener** has been made superintendent.

At a recent meeting of the Rhode Island Section of the American Association of Textile Chemists and Colorists, the following new officers were elected: vice-chairman, **Arthur F. McLean,** Glenlyon Print Works; councilors, **Thorwald Larson** of Carbic Color & Chemical Co., Inc. and **Edward Lawrence,** Cranston Print Works.

Harry A. Turner succeeds Robert F. McKown, resigned, as superintendent of the finishing plant of Riegel Textile Corp.'s Ware Shoals Division. He was previously assistant superintendent of cotton finishing.

Ben Mayo, James Bennett, and **Durward Costner** have been promoted to divisional superintendents at Rock Hill Printing & Finishing Co.

J. W. Quinn has been made general superintendent of manufacturing of Rhyne-Houser Manufacturing Co.'s plants 1 and 2. He was formerly connected with Springs Cotton Mills.

Harry Ilg, formerly with Stonecutter Mills, Inc., has joined the technical department of William Skinner & Sons, Inc.

Henry G. Rollins has been named general manager of the Slater Manufacturing Co. division of J. P. Stevens & Co., Inc., in addition to his other duties as general manager of three other divisions.

John P. Stevens, Jr., has been elected chairman of the board, and **Joseph H. Sutherland,** president, of J. P. Stevens & Co., Inc. The new chairman succeeds his brother, Robert T. Stevens, now Secretary of the Army.

Stanley F. Banas has left Wamsutta Mills to become controller at Susquehanna Mills, Sunbury, Pa.

John H. Walker has been named superintendent of Textron Puerto Rico's tricot knitting plant at Humacao, P. R. He was previously with the A-Q Mills, Inc., in South Carolina.

William Pollock has succeeded the late Mariano Bishop as executive vice-president of the Textile Workers Union of America, CIO. **John Chupka** has taken over Mr. Pollock's post of secretary-treasurer and continues as woolen-worsted director.

William O. McMullan, formerly overseer of second shift in the cloth room, has been promoted to general overseer of the cloth room at the Clarkesville, Ga., mill of United Merchants & Manufacturers, Inc. **Simpson Logan** is now second shift cloth room overseer.

Donald B. Derby is now president of the United States Finishing Co.,

IS YOUR MILL A
SWEAT SHOP
• Comfortable workers are more productive.
• Relief from heat is as important as relief from cold. Fans are as necessary as furnaces.
• Keep your mill comfortably cool. Install a Murray mill-ventilating system . . . incorporating the most efficient industrial ventilating fans obtainable —made by the Murray Company of Texas.
• There are Murray fans in all sizes, for every job from spot-or-man cooling to large area heat evacuation and ventilation.
Write today—our ventilating engineers are at your free disposal.
H. C. BIGLIN CO., INC.
177 HARRIS STREET, N. W.
ATLANTA, GEORGIA
EXCLUSIVE SALES AGENTS
Murray
COMPANY OF TEXAS
ATLANTA, GA. DALLAS, TEX.
INDUSTRIAL VENTILATING FANS

a post he has held unofficially since the firm's reorganization of officers last summer.

The following promotions were recently announced by Waverly Mills, Laurinburg, S. C.: **W. L. Dallas,** superintendent of Waverly and Scotland Mills; **Dan Roach,** general overseer of weaving; **Ernest Stucky,** third shift assistant overseer; **W. I. Henson, Jr.,** second shift assistant overseer; **B. T. Scoggins,** first shift assistant overseer; and **Albert Adcox,** cloth room overseer.

Obituaries

Edward S. Alden, 64, vice-president and treasurer of Whitin Machine Works, January 10.

Mariano S. Bishop, executive vice-president of the Textile Workers Union of America, CIO, January 2.

James H. Bulkley, 39, manager of the decorative fabrics division of Mooresville Mills.

Fred J. Coggeshall, 70, retired superintendent of Bates Manufacturing Co.

C. H. Currier, 66, chairman of the board of Kewanee-Ross Corp.

Thomas N. Hunter, 50, McCrary Hosiery Mills.

H. O. Jackson, 54, president of Great Falls Bleachery & Dye Works Manufacturing Co., January 6.

Vance W. Jenkins, 58, owner of Catawba Valley Finishing Co.

Thomas E. Kendall, 63, former vice-president of Minneapolis Knitting Works, January 13.

John Moore, Sr., 74, president of Dacota Cotton Mills.

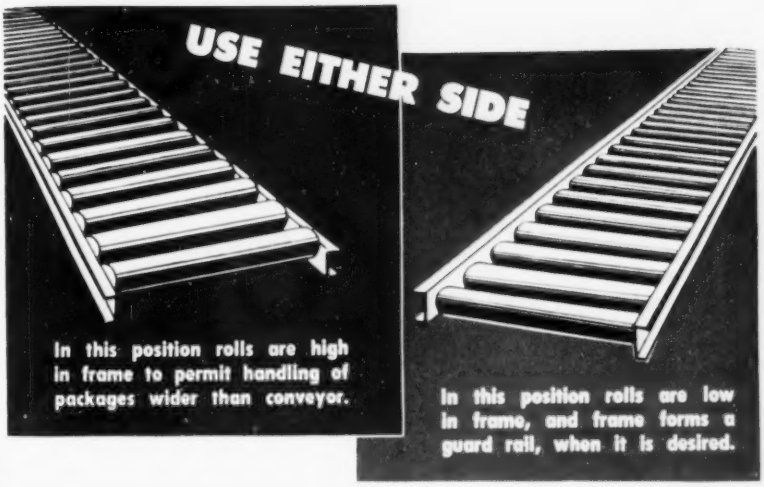
Fred L. Neaves, 49, general superintendent of Chatham Manufacturing Co.

Clarence R. Miller, 68, chairman of the board of Texas Textile Mills, Inc.

DeLambert P. Stowe, 64, secretary-treasurer of Perfection Spinning Co. and South Fork Manufacturing Co.; vice-president of Acme Spinning Co. and Linford Mills, Inc.

Stanhope A. Summey, 71, retired superintendent of Alexander Manufacturing Co.

George R. Weber, vice-president, treasurer, and a director of Raybestos-Manhattan, Inc., January 14.


USE EITHER SIDE
In this position rolls are high in frame to permit handling of packages wider than conveyor.
In this position rolls are low in frame, and frame forms a guard rail, when it is desired.

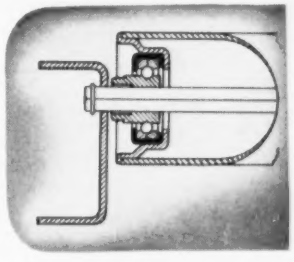
ONE of MANY practical features of *Logan*

STOCK ROLLER CONVEYOR

Shown above is one of the features of Logan Stock Roller Conveyor. Other features include (a) immediate shipment (b) available in several sizes (c) both straight and curved sections can be furnished (d) both stationary and portable supports available. Use the coupon for literature.

FEATURES

ROLLER—2¼" O.D. No. 16 Ga. Welded Steel Tubing. Pressed Steel cup secured to tubing. Cap. 150 lbs.
SHAFT—7/16" Hexagon Cold Rolled Steel. Positively locked against rotation by hexagon holes in frame.
BEARING—No. 50. Slip fit in cup, easily removed and replaced. Protected position — set back from end of roll.
FRAME—3½" x 1¼" x 10 Ga. Pressed Steel Channel. With four 1-5/16" O.D. 13 Ga. Welded Tubing ties per 10'-0" section. Capacity 75 lbs. per foot with supports on 10'-0" centers and 380 lbs. per foot with supports on 5'-0" centers.
COUPLING—Furnished with bolted type for stationary service. Can furnish hook type for portable service if preferred.



DETAIL OF ROLLER

ALSO Stock WHEEL CONVEYORS
In both straight and curved sections. Ideal for portable use. Light-to-medium duty. Write for details.

Write or Phone Your Requirements

Logan Co., Louisville, Ky.

☐ Send literature on Stock Conveyors

Mr. _____

Firm _____

Address _____

Logan CONVEYORS
LOGAN CO., 206 CABEL ST.
LOUISVILLE, KENTUCKY

SUPPLIERS News

WHAT THEY ARE DOING

Semet-Solvay Division, **Allied Chemical & Dye Corp.**, has announced that a full-scale petrochemical plant is under construction at Buffalo, N. Y., for the production of Alcowax, a textile sizing and finishing agent, and will be in operation sometime this year.

Louis Allis, Jr., formerly vice-president in charge of sales, has been elected a vice-president of **The Louis Allis Co.** and joins his brother in the overall active management of the firm's operations. C. G. Skidmore, formerly sales manager, succeeds Mr. Allis and also will perform the function of general sales manager.

An expansion program, expected to cost about $4,000,000 for the production of viscose textile yarn at its Lowland, Tenn., plant, has been announced by the **American Enka Corp.**

Miss L. J. Baxter has been appointed director of customer service department at **American Polymer Corp.** This department is designed to expedite delivery of orders, coordinate and trace shipments, and facilitate requests for special products.

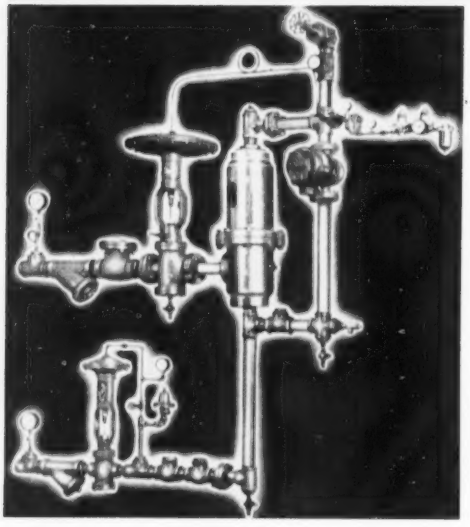
New machines are being installed at **American Viscose Corp.'s** Roanoke, Va., plant which are expected to increase productive capacity for covered Filatex elastic yarns by 50%. John Wiggins has been promoted to the general rayon staple sales staff. J. Raymond Murphy, Jr., previously in the weaving division of the firm's textile research department, has taken Mr. Wiggin's place on the Philadelphia district sales staff. John Reid heads the acetate sales division in the Charlotte, N. C., office, succeeding Norman A. Cocke, Jr., who is now district sales manager at Charlotte.

The following new appointments have been made by the **American Pulley Co.:** Henry H. Hamilton, formerly advertising manager, to assistant manager of the materials handling division; Joseph C. Salette, Jr., to sales promotion and advertising manager; George L. Michel replaces Mr. Salette as the district manager of the St. Louis office; Samuel S. Stuart, formerly in the Boston office, to district manager of the Philadelphia territory; John J. McFarland, previously with Illinois Lock Co., to district manager of the Minneapolis office.

Atlantic Chemical Co., Inc., has purchased the controlling interest in Metro Dyestuff Corp. and has changed its name to **Metro-Atlantic, Inc.** The Canadian subsidiary is now known as Metro-Atlantic (Canada), Ltd., instead of Roxbury Chemical Company-Canada-Ltd., the former name.

Atlantic Steel Co., Atlanta, Ga., has resumed the fabrication of concrete reinforcing bars through its fabricating division, after a lapse of ten

ARE YOU PAYING "EXTRA" for HOT WATER?



DO YOU GET CONSTANT UNIFORM TEMPERATURES FOR BLEACHING AND DYEING PROCESSES?

NO STORAGE TANKS REQUIRED. EASILY INSTALLED. EASY TO CLEAN.

Pick INSTANTANEOUS WATER HEATERS

Pick STEAM INJECTION WATER HEATERS

provide ALL THE WATER NEEDED AT EXACT TEMPERATURE

IN DAILY USE AT
Exeter Mfg. Co.
Kerrigten Finishing Co.
Guyan Mills
Jordan Mfg. Co.
Pepperell Mfg. Co.
AND MANY OTHERS!

Hot water is important in your business . . . and it can be costly! PICK Heaters eliminate fluctuating temperatures. They are entirely automatic to provide and accurately maintain water temperatures up to 180° F. Water is heated INSTANTLY by quiet steam injection — any quantity required. Only water used is heated — no wasted fuel. Easily installed in corners, on walls, or overhead — no storage tanks required. Seven sizes available with rated capacities of 10 to 300 gallons per minute at 140° F. temperature rise.

Write Dept. T18 for Details and Specifications

MANUFACTURED BY
PICK MANUFACTURING CO.
WEST BEND, WISCONSIN, U.S.A.

years. Head of the division is B. W. Bird, who has been manager of the firm's manufactured products sales department.

The **Automatic Transportation Co.**, Chicago, Ill., has announced a plan for rental of industrial trucks on a nine-year contract basis. It will be carried out in conjunction with C. I. T. Corp., the industrial financing subsidiary of C. I. T. Financial Corp.

Roy Schrimshire is now representing **The Standard Card Clothing Co.**

Mr. Schrimshire

in Georgia, Alabama, Tennessee, and Mississippi.

Baker-Raulang Co. has purchased the Lull Manufacturing Corp., Minneapolis, and will operate it as a wholly-owned subsidiary under the name of **Baker-Lull Corp.** LeGrand Lull becomes a director of the new subsidiary and the parent company as well.

The **Bentley Knitting Machinery Organization, Inc.**, has announced a plan which will enable knitters of children's hosiery to change over to automatic machines without changing the styling of lines which the knitter has established. Machines are built to order to match the knitter's present line, so that the changeover can be made gradually and employees can be trained to operate the new equipment as the machines are set up.

John F. Shea, formerly northeastern district sales manager, has been promoted by **Buffalo-Electro-Chemical Co., Inc.**, to general sales manager. Fred N. C. Jerauld, previously assistant to the president, has been made manager of sales promotion.

Strong, Carlisle and Hammond Co., Cleveland, O., has been appointed national distributor for the new "Borgana" boiler water treatment, developed by the chemical division of **The Portland (Ore.) Shingle Co.**

Draper Corp. has closed its Walker division in Philadelphia and removed its machinery to the Pioneer Heddle

ANY

ELECTRIC MOTOR BEARING YOU NEED . .

JOHNSON BRONZE offers you a complete service on electric motor bearings. The Catalog illustrates and lists these bearings by manufacturers' numbers, motor type, frame or model number, and complete size data, as well as the Johnson part number. Be sure you have the latest catalog for reference and ordering from your local distributor.

Johnson EM Bearings are correct in design and tolerance and made of an alloy that will meet the best operating conditions. They slip right into position without additional work. For satisfactory results, use Johnson EM Bearings.

JOHNSON BRONZE COMPANY
550 So. Mill Street • New Castle, Pennsylvania

JOHNSON Sleeve BEARINGS Type

Sleeve Bearing Specialists Quarter Since 1901

- From Distributor's Stock

Johnson EM Bearings

SUPPLIERS News
WHAT THEY ARE DOING

& Reed Co., Atlanta, Ga., in which it recently acquired an interest. The new operation will be housed in an addition to the present Pioneer plant. No changes in management will be made, Mark Mayes continuing as president.

Harry Price, vice-president of **Celanese Corp. of America,** has retired after 26 years of service with the company.

Donald H. Brewer has been elected a vice-president of **Container Corp. of America.** He has been with the firm since 1934.

William W. Winkler has been elected president of **The Durant Manufacturing Co.,** succeeding his father, William K. Winkler, now chairman of the board. Robert B. Winkler has been made vice-president and Leo A. Nourie, secretary.

Dr. Hugh W. Gray has been made laboratory director of the textile fibers department's pioneering research division of **E. I. du Pont de Nemours & Co., Inc.** Succeeding him as a research supervisor in the chemical department at the experimental station is Dr. Allan K. Schneider. Ambrose R. Chantler, sales advisor for the organic chemicals department, has retired after 34 years with the company.

Joe Shacklett has been made sales manager, thread guide division, of **American Lava Corp.** Sales in the

Mr. Shacklett

Mr. Spearman

north and east are serviced by Jay S. Gosnell; Joe Spearman is handling southeastern sales. Sales in all other areas are handled by Mr. Shacklett.

C. Brenton Cook, with **Elwell-Parker Electric Co.** since 1914, has retired.

Roy Faigenbaum has been appointed vice-president in charge of sales of **Fidelity Machine Co.** He replaces Howard I. Green, resigned. Walter Larkin, senior inventor and designer and with the firm for thirty years, was recently honored on his eightieth birthday.

Kenneth R. Fox has resigned from Burlington Mills Corp. and has joined **Fabric Research Laboratories.** He will be in charge of a newly created development group, designed to provide a service which will make better use of laboratory product and process research findings and to adapt them to serve the textile industries in a more useful fashion.

The Foxboro Co. has opened a branch office at 2207 South Pinecrest, Wichita, Kansas. Dale G. Hugley, formerly with the Tulsa branch, is in charge.

General Electric Co. has announced a new program to provide customers with prompt service on inoperative electric motors. Called the small motor service station plan, it will provide a more complete network of repair stations for G-E fractional

PRACTICAL PRESCRIPTIONS

Here are Talcott tonics for your business.

We specialize in specific solutions to chronic problems where financing and credit are concerned.

Why not find out how Talcott can brighten your profit picture—and cure working capital headaches?

Just contact Department M. No obligation, of course.

James Talcott, Inc.
Since 1854
225 Fourth Ave., New York 3, N.Y.
ORegon 7-3000

horsepower and small integral horsepower motors.

Marketing of chemical products manufactured by the Tennessee Eastman and Texas Eastman divisions of **Eastman Kodak Co.** is now being handled by Eastman Chemical Products, Inc., Kingsport, Tenn. J. C. Stone is president of the new organization. Other appointments are: plastics, S. E. Palmer, vice-president; D. C. Williams, sales manager; chemicals, H. L. Ford, vice-president; J. E. Magoffin, sales manager; textiles and advertising, R. L. Churchill, vice-president; A. A. Owen, manager textile sales service; C. F. Earnhardt, Jr., manager order and planning department; R. C. Tuttle, advertising director.

The Hyatt Bearings Division, **General Motors Corp.,** has appointed F. H. Webster manager of the western division sales office in Chicago. He succeeds C. L. Newby, retired.

Glenwood Machinery Associates, Inc., has moved to larger quarters at 85 Chestnut St., Newark 5, N. J.

Harmon Color Works, a division of **The B. F. Goodrich Co.,** have been made a part of B. F. Goodrich Chemical Co. Orville E. Isenburg is sales manager.

A southern office at 221 S. Church St., Charlotte, N. C., has been established by **The Chemstrand Corp.,**

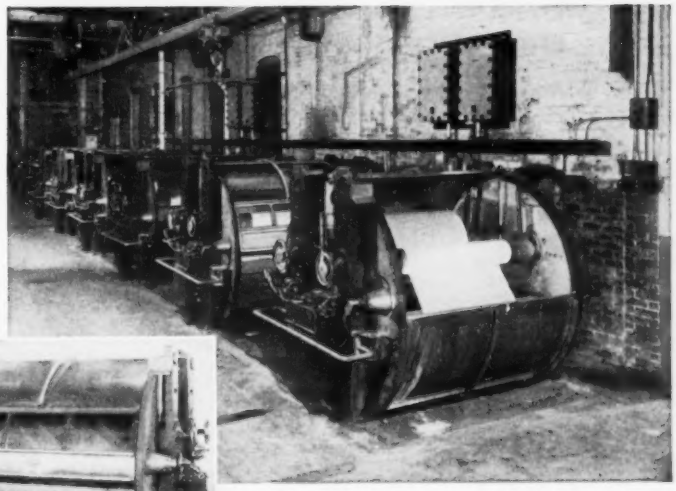
Mr. Dalton

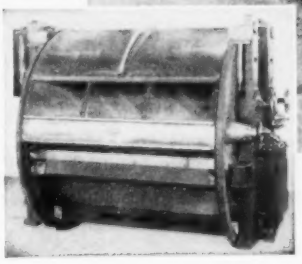
headed by Masten R. Dalton. Mr. Dalton was previously with American Viscose Corp.

Ralph Gossett, Sr., recently retired as head of **Ralph Gossett & Co.,** Greenville, S. C. He has been connected with textiles for over forty years, and founded the firm in 1919. Mr. Gossett is succeeded as head of the company by his son, Ralph Gossett, Jr.

Fritz Degener is now general sales manager of chemicals for **Heyden Chemical Corp.** A new methanol

NOW – for Better, Faster Dyeing of Synthetics with GLASCO DYE JIG ENCLOSURE





Enclosure in closed position

This enclosure now makes it possible to maintain controlled mean temperature throughout dyeing time of Nylons, Acetates and other Synthetics.

As a consequence, dyeing time is shortened. Uniform stripping is assured in redyeing or changing the color of a fabric. Chrome blues and other difficult colors can be jig-dyed. Colors are well dispersed, and level dyeing without shifting is possible. In soaping, temperature is prevented from rising too high and so causing a dull finish. Steam and water are saved.

Other advantages:

New design of hood saves space—no overhead obstructions, roller doors on bearings swing down and under jig when open — minimizes dripping — prevents steam blast toward operator when hood is opened — no cables, chains, counterweight posts to obstruct. Jig enclosure can be fitted to any jig — note big windows for easy observation of interior when jig is closed.

Manufacturers of modern, custom built metal equipment for wet processing uses, including Dye Jig Enclosures, Dye Tubs and Becks, Wash Tubs, etc. of stainless steel and other metals that resist corrosion under most alkali and acid conditions.

GLASCO EQUIPMENT CORP.

Pioneer Fabricators of Stainless Steel Equipment

10 WAIT STREET — GLASCO PRODUCTS — PATERSON 4, N. J.

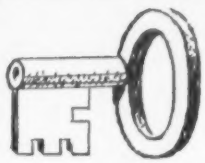
Phila. Area: Marple Organization, 1200 Commercial Trust Bldg., Philadelphia 2, Pa.

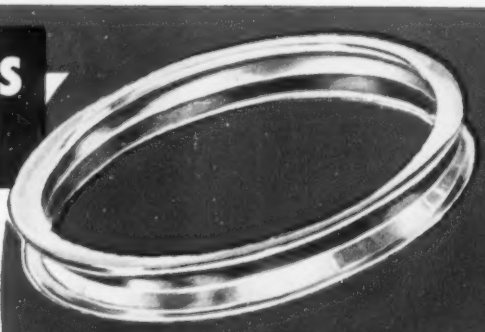
New York State: Sanders Industrial Equip. Co., 1351 Broadway, Albany 4, N. Y.

South: Henry H. Hersey Co., 44 Norwood Place, Greenville, So. Car.

New England: Harris & Underhill, 446 Statler Bldg., Boston, Mass.

FAMOUS RINGS





ROMANS CARRIED KEYS RIGHT AT HAND!!

No searching for keys when the Romans came home . . . the key was on the ring, and the ring was on the finger.

KEEP RAGAN RINGS ALWAYS AT HAND

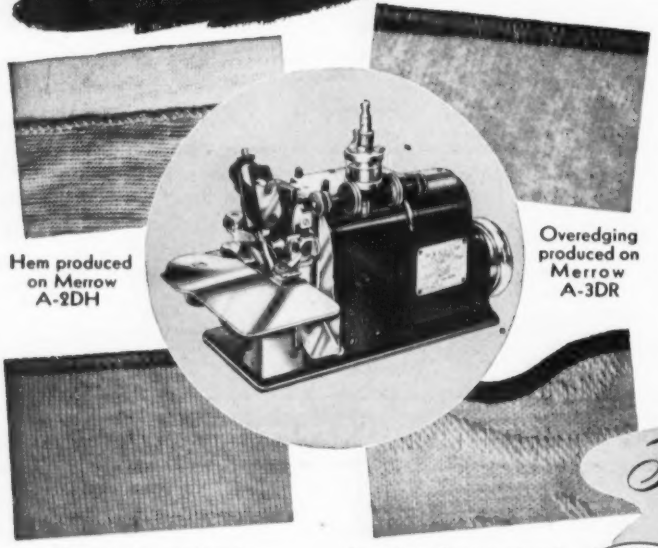
And next time you have to replace rings, you'll solve a lot of spinning problems, because Ragan Rings are harder, smoother — and better engineered.

Ragan Rings

RAGAN RING COMPANY • *The only manufacturers of Textile Rings in the South.* 866 Murphy Avenue, P. O. Box 174 • Station A, Atlanta, Ga.

REPRESENTATIVES: John Foard, P. O. Box 574, Newton, N. C. • William S. Johnstone, P. O. Box 3213, Station A., Greenville, S. C. Arthur Norris, H. B. "Beach" Askew, John Johnson, 443 Stonewall St., S. W., Atlanta, Ga. • William R. Fox, P. O. Box 380, Providence, R. I.

"MERROWING" . . . Overseaming, Overedging and Hemming



Hem produced on Merrow A-2DH

Overedging produced on Merrow A-3DR

Overseaming produced on Merrow A-3DW

Smooth scallops produced on Merrow A-3U

Merrow Overstitching Machines reflect over 60 years' experience in the manufacture of industrial sewing machines. The term "Merrowing" . . . used throughout the industry to describe overstitching . . . is recognition of this experience and "know-how"

Illustrated are a few of the many applications possible with Merrow Overstitching Machines.

Let us demonstrate the work of these machines on swatches of your own fabrics: write The Merrow Machine Co., 2803 Laurel St., Hartford 6, Conn.

TRADE MARK REG.

The MERROW MACHINE COMPANY

ESTABLISHED 1856 INCORPORATED 1898

DISTRIBUTORS IN PRINCIPAL TEXTILE CENTERS

2805 LAUREL STREET • HARTFORD, CONN.

plant is being built jointly by Heyden and Monsanto Chemical Co. The output is expected to be approximately 25 million gallons per year.

Hardesty Chemical Co., Inc., has been merged into W. C. Hardesty Co., Inc., and is operating as the Hardesty Chemical Division.

Robert F. McKown, formerly with Riegel Textile Corp., has joined **Hart Products Corp.** as manager of the firm's Spartanburg, S. C., branch office.

The **Robert E. Mason Co.,** Charlotte, N. C., has been appointed sales

Mr. Mason

and service representative in the states of North and South Carolina for **Barco Manufacturing Co.**

Hemphill Co. has opened new quarters at 2011 English St., High Point, N. C.

International Business Machines Corp. has appointed John H. Temple as special representative for the textile industry. His headquarters are in Charlotte, N. C.

James Balloch will represent **Jacques Wolf & Co.** in the territory South Carolina, Georgia, and Tennessee. He was formerly with Pacific Mills and Renfrew Bleachery.

S. J. Stowell has been appointed merchandise manager of the **Kold-Hold Manufacturing Co.,** Lansing, Mich. Charles E. Glennon is now sales engineer for the Platecoil division of the firm.

Percy A. Legge has reopened its Greensboro, N. C., office at 710 W. Market St. G. Lawrence Wagoner is district manager.

Thomas L. Carver, formerly with General Motors Corp., has joined the Fiber Glass division of **Libbey-**

Do You Have a Snagging Problem with Synthetics?

Plastics can solve many snagging problems for the synthetic yarn processor and user.

Laminated plastics provide a hard non-porous surface, take a high polish, and resist wear and corrosion.

Our engineering staff is anxious to work with you in adapting plastics to eliminate your snagging troubles.

Shown here are some of our current applications of plastics to help the synthetic yarn processor improve the quality of his product.

1 & 1a—Draw Off Caps for Nylon and Orlon Shipping Pirns
2—Take Up Bobbin Redraw Cap
3—Redraw Cap for Take Up Tube. Spring Type Fingers
4—Precision Built, Dynamically Balanced Plastic Winder
5—Headless Take Up Tube of High Density Laminated Phenolic
6—Nylon Sizing Cylinder Cap
7—Ring Twister Bobbins Built to Withstand Tremendous Crushing Forces of Synthetic Yarns

ENGINEERED *Plastics*
INCORPORATED
Gibsonville, North Carolina

For further information use Handy Return Card, Page 200

SUPPLIERS & News
WHAT THEY ARE DOING

Owens-Ford Glass Co. as a sales representative.

Arthur D. Little, Inc., has announced plans for construction of a building in West Cambridge, Mass., which will house the firm's experimental operations in physics, chemical engineering, new-product development, and production methods. Construction is scheduled to start next month.

The **Material Handling Institute** has announced the election as president of Howard M. Palmer, Lewis-Shepard Products, Inc. Charles B. Elledge, General Electric Co., and Walter E. Schirmer, Clark Equipment Co., were elected first and second vice-presidents, respectively.

O. B. Wilson, previously field sales manager, has been promoted to industrial instruments sales manager for the industrial division of **Minneapolis-Honeywell Regulator Co.**

Dr. Raymond H. Hartigan has joined the executive staff of the **Mellon Institute** as assistant director of research.

Roy T. Cowing has been made branch sales manager for the Merrimac Division of **Monsanto Chemical Co.** at its Charlotte, N. C. office. Technical sales specialist in textile chemicals for that area is Robert N. Foster. Winfield E. Drown has taken over Mr. Cowing's former position as consumer products manager.

John B. Hammett has been made manager and Forrest C. Ames, sales manager, of **Mount Hope Machinery Co.**

U S Bobbin & Shuttle Co. has established a new division devoted exclusively to the production of warper beams and beam heads Ralph F. Dutton is vice-president in charge of manufacturing. Milton F.

Mr. Cooke

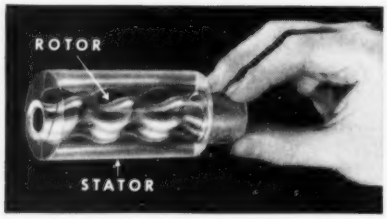
Cooke, who has represented the company in Connecticut, has been transferred to the Providence office. His new territory is Fall River, New Bedford, Pawtucket, Providence, and certain other mills in Massachusetts.

Philip C. Wentworth has retired as treasurer of **National Ring Traveler Co.,** after more than 33 years in the organization. Frederic L. Chase, Jr., is now president and treasurer. T. Hill Ballard has joined the southern sales force of the firm with headquarters at the firm's branch office in Charlotte, N. C. His territory is North Carolina and Tennessee.

Dr. Carlyle G. Caldwell, with the firm since 1940, has been elected an assistant vice-president of **National Starch Products Inc.**

Wentworth Smith has been elected director and vice-president in charge of sales of **Neptune Meter Co.** He

HOW IT WORKS
shows why the MOYNO has all these Advantages:



Rotor and Stator Form the Progressing Cavities

Rotor might be described as a stretched-out corkscrew. The stator is like it but has a *double* internal thread. As shown in the illustration, the rotor and stator thus form closely fitted cavities. As the rotor revolves, the material constantly moves or progresses within these cavities toward the discharge end.

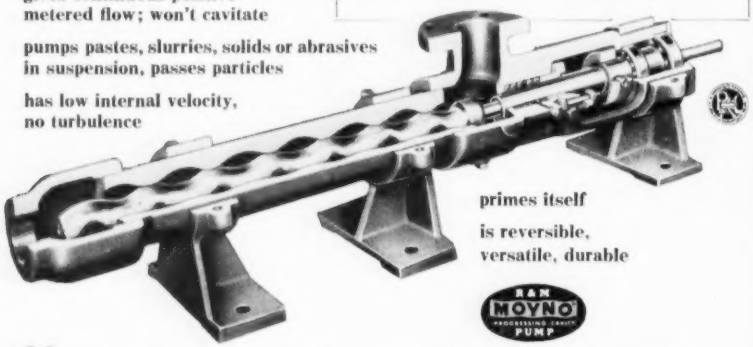
Thus material is moved quietly and steadily, with a minimum of turbulence. And because of these cavities, the material may be a paste; it may contain solids in suspension; abrasive slurries are no problem.

pumps practically anything

gives continuous positive metered flow; won't cavitate

pumps pastes, slurries, solids or abrasives in suspension, passes particles

has low internal velocity, no turbulence



primes itself

is reversible, versatile, durable

R&M MOYNO PROGRESSING CAVITY PUMP

Moynos solve many pumping problems. They will handle acids and alkalis, hot or cold materials, liquefied gases. They'll handle practically anything you can think of as pumpable, and handle difficult jobs better than any pump we know.

Moynos are available in a wide variety of types and sizes and materials, with displacements up to 250 gallons per minute, pressures up to 1000 p.s.i. And you'll be amazed at their small sizes, their high efficiency, their long, trouble-free operation.

Get this free bulletin No. 30B

Details, specifications, and a more complete explanation of how Moyno pumps work and what they can handle. Call the nearest R&M Moyno man, or write Robbins & Myers for a copy.

ROBBINS & MYERS, INC.

SPRINGFIELD 99, OHIO • BRANTFORD, ONT.

succeeds Rex J. Van Gorder, retired.

Reichhold Chemicals, Inc., has appointed Archie H. Dean sales manager of its newly-formed specialty products division; Donald G. Patterson is now technical assistant on resins and plastics to Henry H. Reichhold. Mr. Dean was formerly with Allied Chemical & Dye Corp.

F. W. Warrington Co., 611 Johnston Building, Charlotte, N. C., has been appointed southern agent for

Mr. Warrington

Riggs & Lombard's products. Associated with Mr. Warrington is G. W. Dudley, Jr., and H. C. Fisher.

Edwin A. Robinson was recently elected a vice-president of **Nopco Chemical Co.** He has been with the firm since 1936.

Karl H. Inderfurth, 1816 Liberty Life Building, Charlotte, N. C., has been appointed exclusive southern agent for the **Page-Madden Co., Inc.,** Mineola, N. Y., manufacturers of porcelain guides for the textile industry.

Marcus W. Keyes, formerly with Kimberly-Clark Corp., has joined **Pittsburgh Plate Glass Co.'s** Fiber Glass Division as sales engineer.

Jackson Kemper was recently elected vice-president of the **H. K. Porter Co., Inc.** and will continue as general manager of the Watson-Stillman Fittings division of the firm. J. R. Alexander was made general sales manager of Quaker Rubber Corp. division.

The Rapids-Standard Co., Inc., Grand Rapids, Mich., has announced that its gravity and belt conveyors are now available on lease, to enable firms to install and use the equipment without making a major capital investment. The firm has also announced that its sales and advertising division is now located at the Rapistan Building, 144 Trowbridge Street NW, Grand Rapids; the sales engineering department has moved to 507 Plymouth Road.

Harry E. Whitmore has joined the staff of the **Reilly Tar & Chemical Corp.** He will promote the sale of products from their newly formed synthetic organic chemicals department.

Andrew C. Perrin has been appointed to the newly-created post of west coast district sales manager of the **Reliance Electric & Engineering Co.** He was previously in the company's Chicago office. Taking over his duties in the Chicago office is Keith E. Carter, from Pittsburgh. J. Edward House, Jr., previously in the Cleveland territory, has been transferred to Pittsburgh.

Jack W. Rembe, export manager of the firm for several years, has been appointed sales manager of the **Rodney Hunt Machine Co.** and will direct the sales activities of its products in both domestic and foreign markets.

M. A. Land, associated with **Westinghouse Electric Corp.** for the

Helps reduce neps... NEW EMERY GRINDING FILLET by CARBORUNDUM TRADE MARK

Emery Grinding Fillet by CARBORUNDUM gives your card clothing true side grinding with no chiselled points or burrs—helps keep neps to a minimum.

On traverse or drum grinders, Emery Fillet by CARBORUNDUM reconditions clothing evenly, dependably. Smooth edges eliminate gaps when spiral winding. Every particle of fine Turkish emery grain is securely anchored to the tough, flexible cotton backing—there's no shedding of the coating.

Specify Emery Grinding Fillet by CARBORUNDUM—the standard of leading mills everywhere. Order today from your CARBORUNDUM Distributor. He carries complete stocks for immediate delivery.

"Carborundum" is a registered trademark which indicates manufacture by The Carborundum Company, Niagara Falls, New York

18½ ft IN-DUS-CO

Metal Core, Wire Bound Nylon Bristle Brush —

Long but not the longest of the brushes we make for textile processing, the 18½ foot brush shown here is typical of the fine trouble-free, long lasting, efficient brushes we make for all textile brushing purposes. Lengths to twenty-two feet *in one piece* are available.

This 18½ foot brush is used on a carpet shear, to raise the pile before for shearing. The metal cores cannot sag or get out of alignment. The tufted nylon bristle is set in slotted metal and sealed fast with special solvent resistant cement and can be renewed when worn.

OTHER IN-DUS-CO BRUSHES INCLUDE:
Brushes for woolens and worsted, furnisher brushes, etc.

Write for descriptive literature.

INUDSTRIAL
Brush Company

WOODSIDE AVENUE • LITTLE FALLS, NEW JERSEY

ONCE USED, ALWAYS SPECIFIED!

EVER-DEPENDABLE
TATEM
SELECTED HICKORY
PICKER STICKS

Yes—Tatem picker sticks cost a little more but last much longer. That's because they are made of only finest quality hickory — perfectly cut, seasoned and finished. Low maintenance cost on looms carrying these picker sticks testifies to the knowledge and modern manufacturing skills developed by Tatem over 84 years.

FOR THAT STRONG, SMOOTH STROKE AT THE HEART OF YOUR LOOM YOU'LL STAY SOLD ON TATEM.

PICKER STICKS • PARALLEL PLUGS • SWEEPSTICKS • CONNECTORS and OTHER LOOM PARTS

TATEM MANUFACTURING COMPANY
EASTFORD, CONNECTICUT

SOUTHERN REP.— GREENVILLE BELTING CO., GREENVILLE, SOUTH CAROLINA
NORTHERN REP.— TATEM SALES COMPANY, EASTFORD, CONNECTICUT

SUPPLIERS News
WHAT THEY ARE DOING

past thirty-five years, has been appointed sales supervisor of the Atlanta branch. Mr. Land is well known in textile circles through his long and close association with that industry and will continue to devote a major part of his attention to textile problems.

Wofford Oil Co., Atlanta, Ga., distributors of Pure Oil Co. products, has announced the appointments of Joe M. Cooper and William M. Elam to its sales force. Mr. Cooper was previously with Clinton Cotton Mills, and Mr. Elam was a foreman at the Clark Thread Co., Albany, Ga.

Paul W. Atwood has been elected president of **Union Bay State Chemical Co., Inc.** Roland D. Earle has been made director of new product development.

William D. Hartman and John O. Neikirk were recently elected vice-presidents of **Wellington Sears Co., Inc.** Mr. Hartman is manager of the Martex towel department; Mr. Neikirk is manager of the company's synthetics department.

Hugh Puckett has been named manager of specialty products department of **American Cyanamid Co.** He has been with the firm twenty-five years. New assistant to the advertising and sales promotion manager of the textile resin department is Robert L. Greason, formerly with Good Housekeeping magazine.

Richard F. V. Stanton was recently elected president of **Whitney Chain Co.** He was formerly with American Machine & Foundry Co.

Textile Banking Co., Inc., has announced the election of T. R. Stearns as president and G. J. Popma, executive vice-president. J. F. Vollaro was elected assistant vice-president.

The Philadelphia division of the **Yale & Towne Manufacturing Co.** and C. I. T. Corp. have announced a plan whereby the firm's industrial lift and fork trucks and allied equipment may be leased on a monthly rental basis rather than purchased outright.

William H. Raye, Jr., a vice-president of The First National Bank of

Climax of the 1952 Georgia Products Spring Festival held in the city of East Point was the crowning of "Miss New South." Gowns worn by the queen and her court were made of fabrics produced at Dundee Mills in Griffin, Ga.

Georgia Textiles in the Limelight

In recognition of the progress Georgia has made industrially, agriculturally, and culturally, Governor Herman Talmadge has proclaimed the week of April 12-19, 1953, as Georgia Progress Festival Week with the theme: Henry W. Grady's "The New South."

Cities and schools throughout the state have been requested to participate in the celebration by arranging for programs and exhibits of Georgia-made products to bring to the attention of Georgia citizens the progress which Georgia is making. Col. Blake Van Leer, president of Georgia Institute of Technology, commends this annual festival as a method of advertising and of expanding consumer demand for Georgia products.

Because textile manufacturing is Georgia's largest industry, it is expected that special recognition will be given to the fabrics and wearing apparel manufactured in the state.

To coordinate and supervise the organization of women's clubs, civic organizations, Chambers of Commerce, grade schools, and high schools for participation in the festival, Mrs. Cornelia Dabney Tucker of Fulton County, Ga., has been appointed as the Governor's representative.

Boston, has been elected to the board of directors of **Saco-Lowell Shops.** The firm's plant facilities will be expanded at Sanford, N. C., and when completed, the Repair & Supply Depot, now located in Charlotte, N C., will be moved to Sanford. New and improved sales offices are being established both in Charlotte and in Greensboro, N. C.

Sandoz Chemicals Works, Inc., has moved its New England offices and laboratory from Boston to new facilities at Tower & Main Sts., Hudson, Mass.

George A. Gade, manager of outside sales, has been made vice-president in charge of sales for **Standard Pressed Steel Co.** He has been with the firm since 1939.

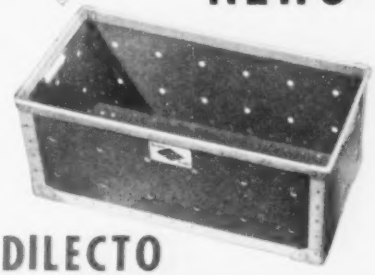
Shepard Niles Crane and Hoist Corp., Montour Falls, N. Y., is observing its 50th anniversary this year

Thomas A. Paxton, with the firm since 1937, has been elected president of the **Southern Textile Machinery Co.,** Paducah, Ky. He succeeds his father, the late W. P. Paxton.

Sonoco Products Co. of Canada, Ltd., has announced a $750,000 expansion at Brantford, Ont. It includes a $400,000 addition to the present

...From SPARTANBURG, S. C.

CDF TEXTILE NEWS



DILECTO
CONDITIONING BOXES

Want boxes that resist moisture, chemicals, steam, and dyes? C-D-F builds a superior line of boxes and trucks from Dilecto, a tough laminated phenolic plastic. Although higher priced, Dilecto boxes last for years, are little affected by many acids, are insoluble in ordinary solvents. They withstand heat, steam, water. Get the facts. Talk over your special materials handling problems with an expert . . . your C-D-F sales engineer.

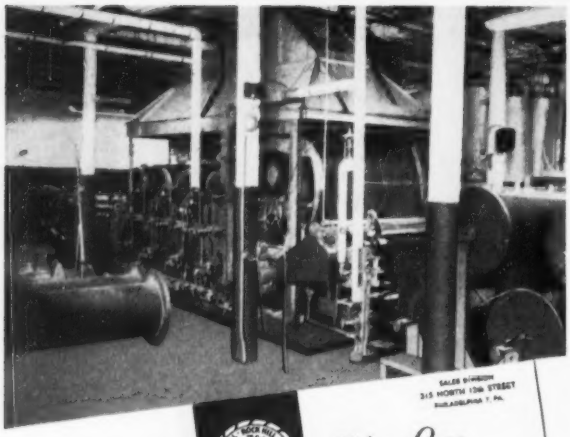
DIAMOND FIBRE
ROVING CANS

Strong, tough, smooth. That's the industry reputation for C-D-F roving cans. Genuine Diamond Vulcanized Fibre body is finished inside and out with a moisture resistant synthetic enamel. Steel top rim is rust resistant plated, smooth, snugly fitted. From a sample can to carload full . . . with C-D-F you get smooth, seamless uniformity.

Write now for new folder showing complete C-D-F receptacles line!

ALL PRODUCTS OF
Continental-Diamond Fibre Company
NEWARK 11, DELAWARE

. . . with Textile Headquarters at 834 Haynes Street, Spartanburg, South Carolina. Call Spartanburg 3-6397 for DILECTO and DIAMOND FIBRE materials handling equipment . . . trucks, boxes . . . loom parts . . . top-speed shipments of CELORON silent gear blanks . . . friendly service from your C-D-F sales engineer.



GOLD-TEX Fabrics Corp.

MILL DIVISION · P. O. BOX No. 630 · ROCK HILL, S. C.

October 13, 1952

Mr. William Johnson, General Manager
Charles B. Johnson Machine Works
P. O. Box 1507
Paterson, N. J.

Dear Bill:

After twenty-one months of operation of the nine cylinder slasher we are so highly pleased that we would like to express our appreciation of the job that has been done here.

Frankly, when the machine was recommended by your representative, Tom Lucas of Lucas Associates, Inc of Charlotte, N. C., there was considerable doubt in our minds as to the feasibility of this type of equipment for our heavy cotton yarns. However, this one nine-cylinder cotton slashers. We also find that our weave room efficiency increased immediately upon the installation of the slasher because of the better wound warp.

tional two-cylinder machine has replaced three conven-

We are highly pleased with this machine from the standpoint of production and return on investment.

Thanking you, we are

Yours truly,
GOLD-TEX FABRICS CORP.
L. M. Allison
L. M. Allison
Plant Engineer

Approved:
John D. Gallins
General Manager

LMA/k

HIGHLY PLEASED With JOHNSON SLASHER Says GOLD-TEX.

"This one nine-cylinder machine has replaced three conventional two-cylinder cotton slashers . . .
"Weave room efficiency increased immediately . . .
"Highly pleased from the standpoint of production and return on investment," says GOLD-TEX.

Full story on request

Charles B. Johnson

PATERSON, NEW JERSEY

REPRESENTATIVES

New England:	*Canada:*	*For the South:*
J. S. Fallow & Co.	J. S. Fallow & Co.	Lucas Associates, Inc.
New Bedford, Mass.	4846 Sherbrooke St., W. Montreal, Quebec, Canada	Charlotte 1, N. C.

Another Mount Hope NEW SERVICE

CUTS COST AND LABOR!

WE NOW DISTRIBUTE LAMINEX

Molded or Fabicated Fiberglass

TANKS, TRUCKS, TUBS, ETC.

Laminex containers have all the advantages of the best ever built until now — plus added advantages neither steel nor aluminum can equal. And cost of Laminex is less than aluminum, far less than stainless steel for a container to do the same job!

> Strong, durable, anti-static, lightweight, easily cleaned; proof against rust, rot, moisture, temperature changes; impervious to all commonly used acids in normal concentration; no bolts or rivets to catch goods; quickly repaired on the spot by unskilled labor.

Standard sizes available from stock, others custom-molded in one piece by the exclusive Laminex method. *In addition, we can fabricate your requirement without any charge for mold.* Write today for details or have a Mount Hope representative call to advise you. No obligation!

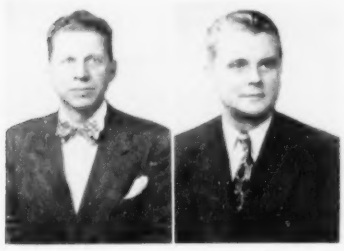
MOUNT HOPE

Industries, Inc., 15 Fifth St., Taunton, Mass.

plant and $350,000 for new equipment.

Ralph E. Clarridge has been made chief engineer for **Taylor Instrument Co.** He replaces Karl H. Hubbard, now technical director and a board member. Succeeding Mr. Clarridge as manager of the application engineering department is George E. Howard. Robert D. Thompson was made division head in charge of research, design, methods, and technical sales in the glass products division.

Robert Reiner, Inc., has announced the election of Fritz Lambach as executive vice-president and John A.



Mr. Lambach **Mr. Vollman**

Vollmann, as secretary. Both have been with the firm over twenty years.

John W. Chase, formerly sales manager, has been made vice-president and secretary of **W. O. & M. W. Talcott, Inc.** He will be in complete charge of operations.

John Cumnock has joined **James Talcott, Inc.,** as representative in North Carolina, Tennessee, Virginia, and West Virginia. His headquarters will be in Charlotte, N. C.

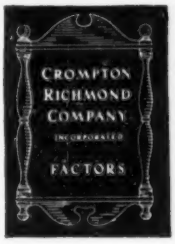
Marion Moulton has been named to succeed Walter E. LeRoy, retired, as manager of the **Union Special Machine Co.'s** Atlanta, Ga., office. He was previously assistant manager. Walter P. Godek has joined the firm as representative for the Boston office, replacing Leonard Parker. His territory is Fall River, New Bedford, and Rhode Island.

The **Whitehead Engineering Co.,** Atlanta, Ga., has appointed three new direct sales representatives: Roy Schrimshire, who will call on mills in Georgia, Alabama, Tennessee, and Mississippi; Jim Coleman, Brad Dunson, and Gene Brigham of the Coleman Co., in South Carolina; Matthews Equipment Co. in New England, New York, and Canada, represented by Verne and Stan Matthews, Charlie Burns, Mike Pizar, and George Hand. Meadows Manufacturing Co., formerly exclusive representatives, will continue to handle the firm's Permalube saddles and nebs and Permalite separator shields.

Thomas Henderson, formerly with Draper Corp., is now associated with **Thackston & Redding, Inc.,** as a textile consultant. His office is in the Montgomery Building, Spartanburg, S. C. Mr. Henderson will devote his time to loom inspections, loom surveys, and weaving problems of the industry.

Werner Textile Consultants are expanding their southern staff. Jack Werner is in charge of southern operations, and will make his headquarters in Atlanta, Ga.

SUPPLIERS News
WHAT THEY ARE DOING



The Human Factor

Your Best Bet

Our unusually strong financial position and long experience in the South is an unbeatable combination. For that strength and experience flows to you when you are Factored by Crompton.

No producing organization is stronger than its liquid status – and we'll keep you continually liquid – without limit if your status is acceptable – by replacing your receivables with cash – on date of shipment if you wish it that way – or any reasonable way best suited for your method of doing business.

Many Southern organizations have grown much stronger through Crompton Factoring – and so can you.

Representatives:
L. N. HUFFSTETLER, Box 505, Gastonia, N. C. • VON D. OEHMIG, Green Island Hills, Columbus, Ga.

CROMPTON-RICHMOND CO., INC.
1071 Avenue of the Americas, New York 18, N. Y.

. . . Especially Designed by Darnell Engineers for Use on

DOFFING TRUCKS

THE XE-74-WCI

Darnell designed for Doffing Trucks here is a caster that will give years of trouble-free service. . . that stands the abuse peculiar to Doffing Truck operation. Note the extra-heavy rimmed, high crowned Darnelloy wheel, featuring closely fitted string guards which keep caster free-rolling at all times. Extra heavy ball races and cones with solid row of precision balls. Alemite Zerk lubrication. Wheel designed for large grease capacity.

Why Not Ask Your Distributor To Show You This New Caster

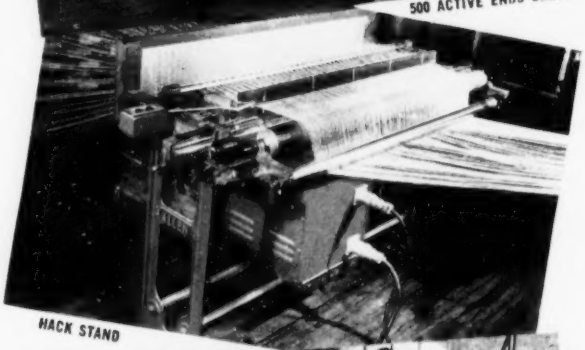
DARNELL CORPORATION, LTD.

DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

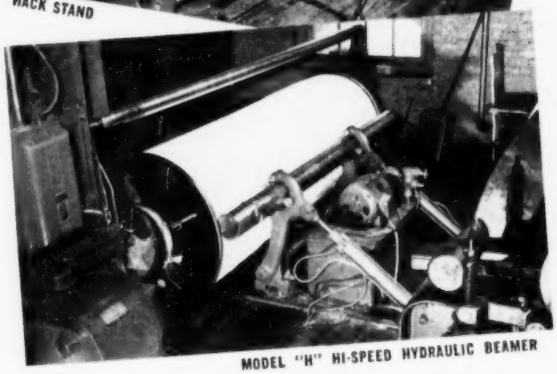
ALLEN HI-SPEED UNITS

Can Increase Your Production

500 ACTIVE ENDS CREEL



HACK STAND



MODEL "H" HI-SPEED HYDRAULIC BEAMER

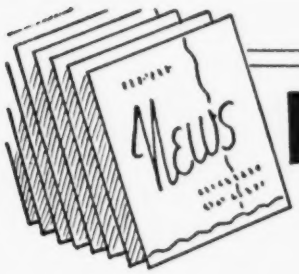
Allen Hi-Speed equipment, through its unlimited flexibility, licked the limited space problem at the North Billerica Co., North Billerica, Mass. One modern high speed woolen system unit has replaced several out-dated units, resulting in greater production and higher quality. Fewer operators now produce *quality warps of greater length in less time.* Call for an Allen engineer to analyze your warping and beaming set-up with an eye towards lowering costs and increasing production. Write for full particulars.

Allen Warper

Successors to Wamesit Warper Co. COMPANY

40 CHURCH STREET, LOWELL, MASSACHUSETTS

Manufacturers of Quality WARPERS • BEAMERS • BALLERS • COMBS • CREELS • TABLE WARPERS and all WARPING EQUIPMENT. Replacement parts for SACO-LOWELL • ENTWISTLE and ALLEN WARPERS



HELPFUL Booklets FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES' advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or new Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 200 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES' advertisers.)

This service is restricted to those engaged in operation and management of textile industries.

3-1 Cotton Finishing Oils. New booklet by Twitchell devoted to finishing Sanforized Fabrics contains such specific data as re-wetting speed, imparted softness, resistance to yellowing, and "balance" of these properties Write: Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati, 2, Ohio.

3-2 Latex Compounds in Backing. Folder discusses use of latex compounds in backing pile fabrics, cotton rugs and flat goods. In addition to atvantages of "Custom Processing" of latex, it also gives technical information regarding various uses. Write: Montgomery Brothers, Inc., Penrose & Packer Avenues, Philadelphia 45, Pennsylvania.

3-3 West Point's Hot Air Slasher. Bulletin describes advantages and capacities of new hot air slasher by West Point Foundry and Machine Works. Detailed specification included. Write West Point Foundry and Machine Works, West Point, Georgia.

3-4 Dyeing, Bleaching and Drying Equipment. Color booklet by Morton Machine Works shows complete line of Dyeing, Bleaching and Drying equipment for cotton, wool and synthetics. Lists advantages and various applications. Write Morton Machine Works, 1718 3rd Avenue, Columbus, Georgia.

3-5 Fire-Retardant Finishes. The Textile Resin Department, American Cyanamid Company, offers new technical bulletin which describes methods of applying Aerotex fire-retardant finishes. Available on request from American Cyanamid Company, 30 Rockefeller Plaza, New York 20, New York.

3-6 Laminated Textile Plastics. Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry. Write: Synthane Corporation, Textile Division, Oaks, Penna.

3-7 Conductivity Recorders and Controllers. 24-page booklet gives details and describes method of controlling and measuring pH, Redox, and conductivity. Includes easy-to-understand theory behind electro-chemical measurement. Write: Minneapolis-Honeywell Regulator Company, Brown Instruments Division, Philadelphia Pennsylvania.

3-8 Proper Utilization of Working Light. Catalog by Arco Company describes utmost utilization of working light through the use of dense, fast-covering white paint for interiors of mills. Write: The Arco Company, 7301 Bessemer Avenue, Cleveland 27, Ohio.

3-9 Dyeing of Orlon, Dacron, and Acrilan. Three booklets by Sandoz deal with Orlon dyeing, fastness of Dacron, and general preparation of Acrilan goods for dyeing. Write: Sandoz Chemical Works, 61-63 Van Dam Street, New York 13, New York.

3-10 New Reiner Raschel Machine. Well-illustrated booklet by Robert Reiner, Inc., explains how the many features and attachments of this machine provide unlimited range in design and fabric weight. Gives dimensions and specificications. Write: Robert Reiner, Inc., Weekhawken, New Jersey.

3-11 Precision Twisting. 6-page brochure on 12-head twister gives applications for shoe thread, hose cord, belting cord, zipper cord, novelty upholstery yarns, seine cord, twine. Materials: cotton, flax, and synthetics. Write: Haskell-Dawes Machine Company, 2231 E. Ontario Street, Philadelphia 34, Penna.

3-12 Ball Bearing Top Rolls. Bulletin features top roll for Spinning and Roving Frames with sealed lubrication, interchangeable units, low-cost servicing and precision quality. Write: Faultless Caster Corporation, Textile Equipment Division, Evansville 7, Indiana.

3-13 Special Fasteners For Textiles. Special bulletin discusses SPS line of Unbrako screws, including socket head cap screws, self-locking set screws, button head socket screws and square head set screws. Write: Standard Pressed Steel Company, Box 582, Jenkintown, Pennsylvania

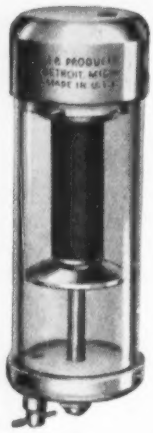
3-14 Card Clothing. 8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages. Write: Benjamin Booth Company, Allegheny Avenue & Janney Streets, Philadelphia, Pennsylvania.

3-15 More About The SRRL Opener. Bulletin by E. A. Bentley Superintendent Swift Manufacturing Company, shows operating comparisons with and without New Opener. Strict case report by a mill that's using it. Write: Salisbury Iron Works, Inc., Salisbury, N. C.

3-16 Butt-Tacking Sewing Machine. Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking. Write: The Merrow Machine Company, 28 Laurel Street, Hartford, Connecticut.

3-17 The History of Aniline. Booklet shows increasing importance of Aniline in industrial fields, and tells the story of this, man's first commercial organic chemical. Write: National Aniline Division, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, New York.

IF YOU HAVE WATER, DIRT OR SLUDGE IN YOUR AIR LINES Use the NEW "M-B"



AUTOMATIC

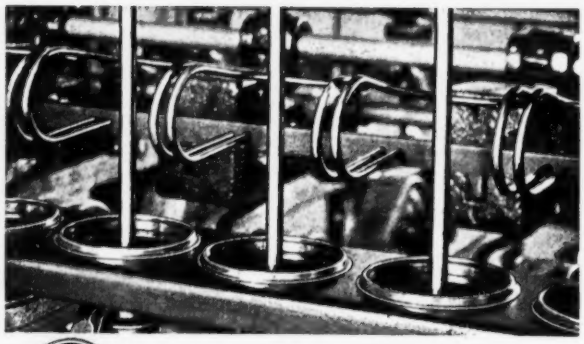
AIR LINE FILTER

— Model W-1 —

Amazing performance is accomplished by using angular air inlets which develop a centrifugal action, abstracting the moisture and throwing it against the wall of the bowl, from where it runs to below the baffle plate, definitely capturing it to be drained. RIBBON TYPE FILTERING UNIT removes solids 10 microns (.00039") and larger. Bowl is transparent plastic, thus all foreign matter filtered from the air line is visible, eliminating guesswork as to when filtering element should be cleaned or bowl drained. No water, dirt or oil in compressed air that has passed through the filter. . . . This piece of equipment gives maximum protection to Scott and Williams Lint Blowers, and Blow-off of the Knotting Device on Barber-Colman Spoolers, also Abbott Winders and Blow-off hoses in Weaving and Spinning Rooms. . . . . This new Filter affords our "Amoskeag" Pneumatic ROLL PICKER, Model A.V.T.A., or similarly operated equipment, maximum protection.

Representatives in All Textile Centers

M·B PRODUCTS
46 Victor Ave.
Detroit 3, Michigan, U.S.A.



G-C—TWISTER RING GREASE... 40% Higher Melting Point

Laboratory tests prove G-C Twister Ring grease doesn't melt at temperatures 40% higher than other greases. Regular mill users find it stays in rings up to 40 hours and longer. No throw-offs, no staining, no clogging. Even distribution, complete lubrication. Used for twisting any yarns. *SAMPLE GLADLY SENT ON REQUEST*

GEORGIA-CAROLINA OIL COMPANY
Quality Lubricants G-C *Since 1919*
MACON GEORGIA

Non-melting oils for top rolls, comb boxes, looms and motors.
Ben Boy non-melting greases for dry cans, slashers, calenders, dryers.

GENERAL, ECONOMICAL, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

16. TEXTILE RESEARCH — Booklet describing search Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and function of department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., 350 Fifth Ave., New York, N. Y.

17. A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK—8 page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

18. FACTORING—Information available on how factoring works to aid client in keeping capital fluid and to avoid credit losses. Inquiries regarding these services welcome.—L. F. DOMMERICH & CO., 271 Madison Ave., New York 16, N. Y.

19. INDUSTRIAL BUILDING—A 32-page booklet entitled "U.S.S. 12, U.S.S. 17 Stainless Steel Walls and Roofs for Industrial Buildings," is now available for distribution. This publication illustrates the use of type 410 and type 430 Stainless Steel Sheets in the construction of industrial and semi-industrial buildings.—U. S. STEEL CO., 525 William Penn Pl. Pittsburgh 30, Pa.

20. VISION TESTING EQUIPMENT—Phamphlet entitled "What You Can Expect From a Good Vision Program" written by a prominent personnel director. Also circular describing the Keystone Occupational Visual Service.—KEYSTONE VIEW COMPANY, Meadville, Pa.

22 THE WONALANCET WAY—Is the title of a editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written.—WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

101. TEXTILE DIGEST—18-page manual reviewing performance-proved procedures for improved handling of more than 60 essential cleaning and related operations in textile mills.—OAKITE PRODUCTS, INC., 22 Thames St., New York, N. Y.

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103 HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

107 FINNELL SCRUBBERS—Illustrated leaflets describing and giving specifications for the Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108 MAPLE FLOORING—Booklet describing finishing of Northern Hard Maple Flooring—list of M.F.M.A.-approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Pure Oil Bldg., 35 East Wacker Dr. Chicago 1, Ill.

109. CARD STRIPPER — Portable dustless card stripper described in bulletin 1050. Advantages of dustless stripping when combined with thorough brush stripping. Used alone or with other systems discussed.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

111 INDUSTRIAL FANS—Catalog sheets with specifications describing the complete line of Murray Industrial fans for plant ventilation. Seven sizes described from 24" with 1/3 HP motor delivering 5700 CFM to 54" with 3/4 HP delivering 17,386 C.F.M. with advantages of heavy gauge metal construction brought out.—H. C. BIGLIN CO., 177 Harris ST., N.W., Atlanta, Ga.

113 COTTON MILL EQUIPMENT—This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

119. MOPPING EQUIPMENT—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., 121 N Aberdeen St., Chicago, Ill.

121. STEAM GENERATORS—Bulletin P-1 describes compact package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

126. "SENTRY-LITE" bulletin illustrating and describing light unit that comes on automatically when power fails, illuminating 10,000 sq. ft. 9 hours or longer. — CLEVELAND ELECTRIC CO., 557 Marietta St. N.W., Atlanta 3, Ga.

127. SOLENOID VALVES—Bulletin "V" lists sizes from 1/2 inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

129. AIR CONDITIONING AND HUMIDIFICATION—Catalog section 101 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control.—THE BAHNSON COMPANY, Winston-Salem, N. C.

130. LIGHTING EQUIPMENT—Bulletin lists and describes the Crouse-Hinds line of lighting equipment which includes floodlights, searchlights, types of industrial lighting fixtures of vapor-tight, dust-tight, and explosion-proof types.—CROUSE-HINDS COMPANY, Syracuse 1, N. Y.

131. "AIR PROCESSING"—Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc.—J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

132. SANDING AND FINISHING—With Coated Abrasives, 88 page illustrated booklet on modern production methods, including information on the use of "Texalox" Cloth take-up roll covering and Fillet Cloth for sharpening cardcloth.—THE CARBORUNDUM CO., Niagara Falls, N. Y.

133. PAINTING SPECIFICATIONS AND COLOR CHIPS—Industrial Paint and Color Guide, CC446, gives full painting specifications for exterior and interior of industrial plants with complete color samples. —THE SHERWIN-WILLIAMS CO., Painter Maintenance Div., Cleveland, Ohio.

135. COLOR CONDITIONING—Booklet illustrated in color describes how DuPont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid.—E. I. DU PONT DE NEMOURS & CO. INC., Finishes Div., Wilmington 98, Delaware.

137. PUMPS AND COMPRESSORS—Bulletin QP-11 presents the standard types of Gardner-Denver air compressors, centrifugal pumps, steam and power reciprocating pumps in a brief and comprehensive manner to enable the prospective user to select the size and type for specific needs.—Gardner-DENVER CO., Quincy, Ill.

138. METAL CONVEYOR BELTS—Recent catalog describes and illustrates Ashworth's entire range of manufactures, including the new Flat Wire Belt design and application, along with their woven wire constructions and Positive Drive Chain Edge belts. —ASHWORTH BROS. INC., Metal Products Div., Fall River, Mass.

139. STEEL SHOP EQUIPMENT—Write for profusely illustrated Hallowell folder describing line of shop desks, tool stands and carriers, cabinets, etc., adaptabe to a wide range of uses. STANDARD PRESSED STEEL CO., Box 582 Jenkintown, Pa.

Make Your Mark with these crayons

NO. 295
for Silk, Rayon and similar fabrics. Marks wash out. Black and colors.

ATLANTIC TEXTILE MILL
Chalk Crayon developed for use with standard chlorine or peroxide bleaching processes. 35 colors.

STAONAL No. 5 for Leather, Fabrics, and miscellaneous uses. Waterproof and permanent. White and colors.

WET LEATHER—Chalk Crayon. Red only.

Free
Illustrated salesmen's price sheet and catalog. Write Dept. TTI

BINNEY & SMITH Co.
41 E. 42nd St., New York 17, N. Y.

CUSTOM Gears
Steel
Cast Iron
Plastic

ENGINEERED and PG TESTED

- SPUR
- SPIRAL
- BEVEL
- WORM
- WORM GEARS

PRECISION makes more textile gears because PRECISION Gears have longer Accuracy. Simple, isn't it—yet, not easy! But, PRECISION gets a head start through superlative gear designing. Then, precision gear cutters (they're up-to-25 year men) and the finest machines take over. They cut "little giants" or electronic gears with proportionate skill. The "South's Largest Makers" means the South's most dependable gears. That's what PRECISION can give you for your next gear needs.

Engineers : Manufacturers — Cams : Bearings : Gears : Chain Drives

DIVISION OF TURNER MANUFACTURING CO.

PRECISION
GEAR AND MACHINE CO.
2001 North Tryon St, Charlotte, N.C.
Ph. 4-6857

THE SOUTH'S LARGEST MANUFACTURER OF GEARS AND CHAIN DRIVES

146. **FUNCTIONAL GLASS BLOCK DATA**—Folder shows in detail daylighting function of Light-directing and Light-diffusing Functional Glass Blocks.—PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

150. **RIHCO HUMIDIFIERS AND COOLING SYSTEMS**—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems.—ALDRICH MACHINE WORKS, Greenwood, S. C.

151. **INDUSTRIAL BRUSHES**—Illustrated booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., 144 Pompton Ave., Cedar Grove, N. J.

155. **DUCTLESS AIR CONDITIONING**—24-page illustrated Catalog No. 2 on Amco humidification and ductless evaporating cooling, along with other Amco humidification devices. Contains relative humidity tables and textile regains. — AMERICAN MOISTENING CO., Providence, R. I.

169. **MACHINE BRUSHES** — Illustrated Folder shows many types of machine brushes and describing their particular use for printing, washing, brushing, singeing, and shearing is sent free upon request. Write: INDUSTRIAL BRUSH COMPANY, INC., Woodside Avenue, Little Falls, New Jersey.

165. **CLEAN, DRY, COMPRESSED AIR** — 8-page color illustrated bulletin thoroughly describes aftercooling, air separating, and air filtering. Also gives size and capacity of R. P. Adams equipment. Write: R. P. ADAMS COMPANY, INC., 216 E. Park Drive, Buffalo, New York.

167. **COLOR CONDITIONING FOR INDUSTRY**—Booklet describing how color is used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale.—E. I. DU PONT DE NEMOURS & CO., INC., FINISHES DIV., Wilmington, Delaware.

173. **BLOWERS AND EXHAUSTERS**—Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. **PAINT STRIPPING BOOKLET**—Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion.—OAKITE PRODUCTS, INC., 22 Thames St., New York 6, N. Y.

179. **BETTER WAYS**—Form 2020, condenser catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Box 97, Toledo, Ohio.

181. **AIR FILTRATION**—Bulletin 234 describes and illustrates the Auto-Airmat, which is the Automatic Dry-Type air filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

187. **SILICONE INSULATION**—Data Sheets 14C describing silicone electrical insulating varnishes used in class H equipment. Protection and longer life with Silicone insulation described.—DOW CORNING CORP., Midland, Mich.

188. **PROGRESSING-CAVITY PUMPS**—A new principle in pumps. Self-priming, positive displacement, uniform flow features discussed.—ROBBINS & MYERS, INC., Pump Div., Springfield, Ohio.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

201. **V-BELT DRIVE CATALOG**—This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 horsepower. Contains many concise, accurate drive tables, diagrams, and other important engineering data.—DAYTON RUBBER CO., Dayton, Ohio.

202. **RELIANCE MOTOR**—Bulletin C-130 on the explosion-proof, corrosive-resisting a-c motor. Design features exclusive with the new motor are enumerated and illustrated in the bulletin.—THE RELIANCE ELECTRIC & ENGINEERING CO., 1076 Ivanhoe Road, Cleveland, Ohio.

203. **TREADED LEATHER BELTING**—This 16 page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., Philadelphia, Pa.

206. **LOOM MOTOR BULLETIN**—The new design of this ball bearing motor is claimed to represent an advance in the design of loom motors fully discussed.—THE LOUIS ALLIS CO., 427 E. Stewart St., Milwaukee, Wisconsin.

207. **TRICO OILER INSTALLATION** — Twelve interesting pages of actual "on the job" photos of Trico oiler applications on nationally recognized machinery and equipment.—TRICO FUSE MFG. CO., 2948 N. 5th St., Milwaukee 12, Wisc.

212. **GATES TEXTILE ACCESSORIES**—Handy pocket-size catalog BHM-7, fully illustrated gives specifications of Gates textile accessories including pickers, lug straps, cheek straps, cone belts, evener belts, hornless straps, take-up roll covering, and others.—THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

218. **BALL BEARINGS FOR TEXTILE MACHINERY**—A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

226. **COTTON CARD DRIVES**—Booklet B-4590 which describes Westinghouse individual cotton card drives. Through the proper design of card motors by Westinghouse, individual drive is now practical and the booklet gives full information.—WESTINGHOUSE ELECTRIC CORPORATION, P. O. Box 868, Pittsburgh 30, Pa.

230. **HEAT RESISTING LUBRICANT**—Descriptive pamplet on Ben Boy High Heat Resisting Lubricant for use in any bearing using excessive amounts of oil or grease or frequent bearing failures.—GEORGIA-CAROLINA OIL CO., 1403 Sixth St., Macon, Ga.

235. **JOHNSON LEDALOYL BEARING BRONZE**—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pa.

236. **LEATHER BELTING CALCULATOR**—Handy and attractive calculator for determining belt, speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, 35 N. 6th St., Philadelphia, Pa.

237. **MOTOR CONTROL**—Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Users listed and advantages discussed.—CUTLER-HAMMER INC., Milwaukee, Wisc.

256. **METERED LUBRICATION** — Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc. — BIJUR LUBRICATING CORP., Rochelle Park, N. J.

259. **SUNOTEX MACHINE OIL**—booklet describing this machine oil as being "custom-made" for the textile industry. Advantages discussed and pictures of uses which includes knitting machinery.—SUN OIL COMPANY, Philadelphia 3, Pa.

262. **SMALL PRECISION METAL PARTS** — Catalog by Torrington Company describes many special precision metal parts made by its Specialties Division. Write: THE TORRINGTON COMPANY, SPECIALTIES DIVISION, 500 Field Street, Torrington, Connecticut.

264. **BALL BEARINGS FOR TEXTILE INDUSTRY** — A new loose-leaf catalog illustrating, describing and listing all special ball bearings developed for textile use.—NEW DEPARTURE, DIVISION OF GENERAL MOTORS CORP., Bristol, Conn.

266 **LUBRICATION**—Bulletin BG2-DC, describes properties of Silicone greases used in motors at high speeds and temperatures, on oven conveyors., tenter frames, can dryers, etc. Decrease by 10 to 1 in relubrication requirements described.—DOW-CORNING CORP., Midland, Mich.

281. **LOOM MOTORS** — Leaflet 51B711A describes all the characteristics of the Allis-Chalmers loom motor required for efficient loom power, high maximum torque, extra overload capacity for breaking-in operation and smooth power.—ALLIS CHALMERS MFG. 6, Milwaukee, Wis.

"What You Want When You Want It"

WONALANCET

PERUVIAN Pima Cotton

WONALANCET COMPANY

128 Burke Street, Nashua, New Hampshire
And 153 Peachtree Street, Atlanta, Georgia

Remember this about

The TYPE S JOHNSON Rotary Pressure JOINTS

Write for Catalog JS-3

The Type S is self-supporting . . . and from a cost standpoint it carries its own weight too. It stops misalignment cold because it shifts with the roll — slashes maintenance because it's completely packless and self-lubricating. It's the perfect answer for many jobs.

The Johnson Corporation
815 Wood St., Three Rivers, Mich.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

302. INSTRUMENTS—Illustrated catalog covering uniformity analyzer, acoustical measuring devices, and other non-destructive industrial measuring instruments. Illustrated brochure describing hypersonic equipment for both laboratory and pilot plant use in the field of ultrasonics.—BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio.

303. PROCESS CONTROL EQUIPMENT—Catalog containing brief description of standard and special process control equipment engineered for textile industry. Includes schematic diagrams.—MASON-NEILAN REGULATOR CO., 1190 Adams St., Boston, Mass.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips.—CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin P-3156 giving details of features and benefits of moisture equipment control for slashers and textile applications.—BARBER-COLMAN CO., Rockfort, Ill.

321. RED-RAY BURNERS—Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

334. TEXTILE MILL INSTRUMENTS—Eight-page bulletin 98180 describes the use of automatic control instruments used on such processes as size cooking, storage kettles, size boxes, slashers, dye vats and driers.—TAYLOR INSTRUMENT COS., Rochester, N. Y.

337. COUNTING DEVICES — Catalog of Trumeter's complete line of counters for every application where counting, measuring or registering is required. Colored pictures illustrate each application.—TRUMETER COMPANY, 1265 Broadway, New York 1, N. Y.

CARDING, SPINNING, WINDING . . .

400. THE TRAVELER — Booklet on ring travelers published quarterly with a technical article on spinning and twisting of interest to mill men.—VICTOR RING TRAVELER CO., Providence, R. I.

401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

404. LAPLESS ENDLESS SPINNER—Bulletin and full information will be supplied on lapless endless spinner and coning belting.—TON-TEX CORPORATION, 16 West 61st St., New York, N. Y.

408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

412. SERVICE FOLDER—Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

414. WORSTED SPINNING—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. DOUBLE-TWISTER FOR LARGE PACKAGES—Bulletin describing two new machines producing straight or tapered top bobbins. Suitable for filament or spun yarns up to three pound capacity. Individual thread stop motion fully discussed.—FLETCHER WORKS, INC., Philadelphia, Pa.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

418. PACIFIC CONVERTER—Graphic description of machine that cuts any synthetic tow; and when desired, blends it with wool or staple sliver, keeping the fibers parallel, and issuing an even sliver of accurate blend.—WARNER & SWASEY CO., Cleveland, Ohio.

419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

420. AUTOMATIC FILLING WINDING—Eight page, two color booklet describing the operation and mechanism of the Hacoba winder.—ATKINSON, HASERICK & CO., 211 Congress St., Boston, Mass.

421. CARD ROLL COVERS—Brochure describing the Davis seamless roll covers. Lists advantages, specifications and offers free trial.—THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

422. MODERN TEXTILE ROLL COVERING—Illustrated booklet on roll covering problems with charts on correct gauges. Also data on Acetex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

426. UNIRAIL UPTWISTER—Bulletin describes Universal Winding's headless package or bobbin take-up unirail uptwister which gives you higher yarn quality and better packages at faster speeds and lower costs, according to the bulletin. Well illustrated with advantages discussed.—UNIVERSAL WINDING COMPANY, P. O. Box 1605, Providence 1, R. I.

430. DIXON DATA—Dixon house organ entitled "Dixon Data," which is available in a new form every other month. These house organs contain information on spinning problems as they relate to saddles and component parts.—DIXON LUBRICATING SADDLE CO., Bristol, R. I.

432. PRECISION TEXTILE WINDING — Bulletin on Kidde Tensions and Density Control for winding rubber cones.—WALTER KIDDE & CO., INC., Belleville, N. J.

435. DOUBLE DECK TWISTERS — Bulletin describes Jumbo (8 oz. to 16 oz. headless or take-up spool packages) and Acme (up to 10 oz. packages) models for high speed twisting of silk, rayon, nylon, etc., to finest deniers.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

436. MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER—Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

437. SPINDLE TAPE LANCING EQUIPMENT—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

438. HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING—Literature shows high-speed Face Drive Twister for accurately building tapered or straightened headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

445. ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

446. WINDING MACHINES—Principles and Practices is the title of Bulletin No. 339, Part 2 on the No. 44 Roto-Coner is profusely illustrated with ex-

What your plant can

accomplish

with Vision Screening

We have just made up a report of savings made by 59 plants:

Big savings in *cost of training new employees* (as high as 75%); reduction in *accidents* and *spoilage;* labor *turnover* reduced 30% or more.

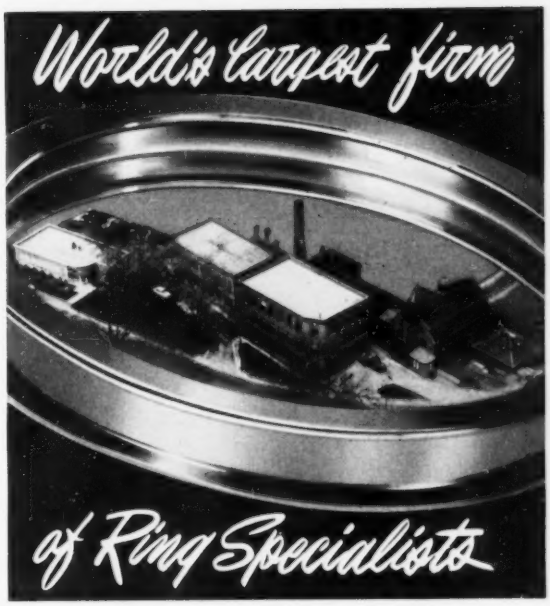
Also increased earnings of employees, less absenteeism, and other gains.

Briefly summarized in a Booklet—which we'll be glad to send to any personnel official on request.

Keystone View Co., Meadville, Penna. Pioneers in Binocular Vision Testing.

KEYSTONE

OCCUPATIONAL VISUAL SERVICE



Supplying the most complete line of standard and auto-lubricated rings.

WHITINSVILLE (MASS.)

SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

Southern Representative: W. K. SHIRLEY, 25 Oak St., Belmont, N. C.

ploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

447. CONE WINDER—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

451. CYLINDER BEARING—New bulletin available describing and illustrating the cylinder **bearing** for spinning frames and twisters. This bearing fits all popular makes and is self-aligning.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Georgia.

455. PIN DRAFTS—Catalog describing the use and features of the machine, what it can do to cut costs in the processing of natural and synthetic yarns, along with specifications and installation data.—WARNER & SWASEY CO., 5701 Carnegie Ave., Cleveland, Ohio.

456. WARP TYING—Bulletin T-2 on the "Two-In-One" Titan automatic warp tying machine—speed, flexibility, efficiency, and economies fully discussed. —EDDA INTERNATIONAL CORP., 470 4th Ave., New York City, New York.

458. CONICAL RINGS AND FLYERS—Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., 318 Franklin St., Buffalo 2, N. Y.

461. PRECISE WIND MACHINE—Form A-92 describes the Foster Model 75 widely used for winding straight or pineapple cones and tubes of rayon, nylon and other filament yarns.—FOSTER MACHINE COMPANY, Westfield, Mass.

462. TEXTILE MACHINERY PARTS CATALOG—A 24-page illustrated catalog describing the complete line of Dayco and Thorobred textile machinery parts including Cots, Aprons, Loop Pickers, Lug Straps, etc.—DAYTON RUBBER CO., Dayton, Ohio.

468. CONDENSED LISTINGS—8-page pocket sized booklet listing by plan flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

WEAVING, SLASHING . . .

501. LOOMS—An accordion type folder is available entitled "Unfolding to You the World's Largest Line of Looms". Information on all types fully discussed. —CROMPTON & KNOWLES LOOM WORKS, Worcester 1, Mass.

502. COUNTING AND MEASURING DEVICES—Condensed Textile Catalog illustrating and describing pick counters, hank counters, cut meters, measuring counters. Wide range of counting devices for production recording on all types of textile machinery. —VEEDER-ROOT, INC., Hartford, Conn.

503. WEAVER'S KNOTTER—A catalog on the Royce Weaver's Knotter given a few instructions as to its use, recommendation as to the proper type knotter for the various types of yarns, and the spare parts that go to make up the knotter.—A. B. CARTER, INC., Gastonia, N. C.

504. LOOM SUPPLIES—Literature describing complete line of straps, strapping, pickers, dobby cords, sticks, binders, bumpers, brake lining and allied products.—E. H. JACOBS NORTHERN DIV., THE BULLARD CLARK CO., Danielson, Conn.

506. SLASHING HINTS—A 20-page booklet offering helpful hints on warp sizing. Subjects: Size cooking equipment, section beam tension, sizing selvages, cooking, use of split rods, weighing for the mix, tips on cooking equipment, storage in kettles, etc.—SEYDEL-WOOLEY & CO., 748 Rice St. N.W., Atlanta, Ga.

507. VARIABLE SPEED SLASHER DRIVE—Reeves bulletin G-503 describes their Servo-Control slasher drive which automatically controls tension from creel to beam, and which controls the stretch in the slasher.—REEVES PULLEY CO., Columbus, Ind.

508. LOOM PRODUCTION CHARTS—Convenient, celluloid card showing yards per loom per week of 40 hours at various loom speeds.—RALPH E. LOPER CO., Greenville, S. C.

509. MULTI-MOTOR SLASHER DRIVES—Booklet designed to bring the descriptive information on multi-motor slasher drives up to date, and emphasize the improvement in the drive through the use of Rototrol for the control of winding tension.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

510. THE ROMANCE OF PRAIRIE GOLD—Attractive illustrated book which tells the story of corn and the uses of corn products to industry.—CORN PRODUCTS SALES CO., 17 Battery Place, New York, N. Y.

511. ALUMINUM BEAMS—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

513. SEYCO PENETRANTS FOR YARN CONDITIONING—Folder describing the scientifically formulated Seyco sizing.—SEYDEL-WOOLEY & CO., 748 Rice St., Atlanta, Ga.

517. LOADING SYSTEM—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

518. NIAGARA TWIST-SETTER—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLEY & CO., 748 Rice St., Atlanta, Ga.

521. STEEL WARP BEAMS—20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broadloom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

523. OVERHEAD MOUNTS FOR BIGGER LOOM BEAMS—Folder illustrating and describing how bigger beams can be adapted under all mill conditions. Includes handy Multiplier Table showing increased yarn capacity possible with bigger beams.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

524. JOHNSON WARP SIZES—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis.—CHARLES B. JOHNSON MACHINE WORKS, Piercy & Holsman Sts., Paterson, N. J.

526. LOOM EQUIPMENT — Folders on flat heddles, frames, and reeds for all types of looms and weaves.—WALKER MFG. COMPANY, DIV DRAPER CORP., Atlantic & Ruth St., Philadelphia 37, Pa.

529. STRAPPING — Looms and harness strapping, complete line. Full information supplied on request. —TON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

530. ROTARY UNIONS—New catalog shows how to cut costs, get better sealing, on can dryers, slashers,

36 years of KNOW HOW

Protects your investment in ALLEN WARPER BEAMS AND BEAM HEADS

"Proved by Time — Improved by Research", Allen Beams and Heads assure you the lowest per-year cost, plus the positive assurance that your yarns will reach the slasher in prime condition. The following advantages you can DEPEND ON without question when you specify GENUINE "ALLEN":

RESILIENT, UNBREAKABLE HEADS

15-ton deflection test has no effect on these heads — they will not take a set. Built-in resilience gives them ability to contain the warp snugly at all stages of build-up. Unbreakable under any conceivable conditions of use.

NEW BARRELS KEEP PACE WITH SYNTHETICS

Allen research has developed barrels that maintain their dimensions under the crushing build-up of synthetic yarns, assuring you uniform warps with no soft cores, no trapping at heads.

PROTECTION AND ECONOMY IN HANDLING

In intra-mill handling and inter-mill shipping, these beams can "take it". The surest protection for your yarn is to handle it on an Allen Beam.

Our 36-year Reputation is Your Protection

ALLEN
BEAM COMPANY
High Speed Warper Beams
Warper Beam Heads
Loom Beams
Adjustable Loom Beam Heads

General Offices — 151 River Road
New Bedford, Mass.
Representatives in all Textile Localities and all Principal Countries of the World.

"GOOD WARPS ARE MADE ON GOOD BEAMS"

SINGLETON'S... THE APRON OF CHOICE FOR SACO-LOWELL SPINNING AND ROVING

Singleton's New-Type, Resin-Reinforced Draft Horse Leather Aprons are available either Endless or Open. These improved aprons now have more than 400% greater resistance to abrasion than ever before.

In actual mill tests on Saco-Lowell Roth, Shaw, Gwaltney (SG-1), or Duo-Roth Spinning, there is a decided preference for Singleton's New-Type Treated Leather Aprons. The same is true of mills using Saco-Lowell FS-2 Roving.

Better performance is the reason for this preference. Singleton Aprons last longer, with fewer replacements. They have a longer **effective yarn life**—a more lasting control over the evenness of yarns produced — than any other aprons made today.

To test these better-than-ever Singleton Aprons for yourself, write, wire or telephone today to the Company, or to the representative nearest you.

RUSSELL A. *Singleton* & SONS
BLANCO, TEXAS

Southern Manager — Tel. 2-2682
GEO. W. SINGLETON, P. O. Box 1496, Greenville, S. C.
S. C. Representative — Tel 2-2682
GEO. W. SINGLETON, JR., P. O. Box 1496, Greenville, S. C.
N. C. Representative
HAMNER SALES AGENCY, P. O. Box 267, Gastonia, N. C.
Ala. and Ga. Representative
INDUSTRIAL SUPPLIERS, INC., LaGrange, Ga.

calenders, etc. Catalog No. 500 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atlanta Ave., Charlotte, N. C.

631. EVENNESS TESTER—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

635. BIG BEAMS—Brochure brings out in chart form the fact that larger beam heads afford a very desirable increase in the capacity of the beam—and it points out the reduction in time that the loom must stand idle for warp tying and beam handling.—WEST POINT FOUNDRY & MACHINE CO., West Point, Georgia.

636. HOMOGENIZER IMPROVES SLASHING — Pamphlet by Manton-Gaulin Manufacturing Company shows how mechanical conversion of size by the Gaulin method produces better size. Gives installation pictures and specifications. Write: MANTON-GAULIN MANUFACTURING COMPANY, INC., Everett, Massachusetts, U. S. A.

DYEING, FINISHING, CLOTH ROOM . . .

605. CONTINUOUS AUTOMATIC EXTRACTING MACHINE — Folder describing the most efficient method of extracting excess liquid from fibrous materials.—C. G. SARGENT'S SONS CORP., Graniteville, Mass.

606. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—E. F. PERKINS & SON, INC., Holyoke, Mass.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., 7th and Tabor Rd., Philadelphia, Pa.

615. HIGH PRODUCTION EXTRACTOR FOR RAW STOCK—YARN—HOSIERY — Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs.—FLETCHER WORKS, INC., Philadelphia, Pa.

616. FINISHING DRIVES—32-page booklet covers complete drives Westinghouse has engineered for the textile finishing industry. Describes all types of finishing ranges and discusses advantages of Westinghouse drives for these installations. "Packaged" drives for batch processes covered.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING — Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation. — TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

623. SELVAGE GUIDER—The Marshall and Williams positive overfeed and selvage guider is described in a brochure of being developed to meet the most modern requirements of the textile finishing industry. Full description, pictures and advantages discussed.—MARSHALL & WILLIAMS CORPORATION, 40 Baker St., Providence 5, R. I.

629. REGENERATION OF ZEOLITE WATER SOFTENERS — Booklet explains advantages of International's Lixate Process in regeneration of zeolite water softeners. Shows how it cuts costs and does a better job. Write: INTERNATIONAL SALT COMPANY, INC., Scranton, Pennsylvania.

635. BALL BEARING ROLLER TYPE SCRAY—Circular No. 604 describing the scray which is far use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills.—BIRCH BROS., INC., Somerville, Mass.

682. LUG STRAP WASHERS—Series 1-U illustrated detailing right and wrong application and use of washers.—A. H. JACOBS NORTHERN DIV., Danielson, Conn.

641. PACKAGE DYEING — Machines for dyeing, extracting, and drying yarn in package and on beams described in illustrated booklet on the theory of package dyeing and equipment for this process.—SMITH, DRUM & CO., Philadelphia 23, Pa.

653. GUIDERS AND TENSION DEVICES—Illustrated and described are the Mount Hope Precision Guiders and open width Tension Devices used for accurate, straight line guiding of open width goods. Bulletin 50-PO.—MOUNT HOPE MACHINERY CO., 15 Fifth St., Taunton, Mass.

DYESTUFFS, CHEMICALS, SOAPS . . .

703. WATER REPELLENTS — Data sheet 1043 describes application of De Cotax 104, which is described as a durable, water repellent finish that is easily applied on conventional finishing equipment and its resistance to spotting; laundry or dry cleaning durability is good.—DOW-CORNING CORP., Midland, Mich.

704. INTERPRETATION OF ANALYSIS — The booklet "Interpretation of Analysis for the Layman" describes many of the common analytical tests made on surface-active materials, and illustrates how the analytical figures are used to deduce the composition of several materials. The booklet also contains a glossary of many terms useful to those who work with industrial chemicals, and a brief discussion of the role Nopco processing chemicals are playing in industry today.—NOPCO CHEMICAL COMPANY, Harrison, N. J.

705. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 23-page booklet outlining methods of silk-soaking and outlining investigation on the soaking, back-winding and degumming of silk. —HART PRODUCTS CORP., 1440 Broadway, New York 18, N. Y.

706. RHONITE RESINS—Booklet describes the Rhonite Resins as being developed to impart handle to fabrics ranging from stiffness through full resiliency to silky suppleness, depending on the demand of the season. Full information and uses given. —ROHN & HASS COMPANY, Washington Square, Philadelphia, Pa.

708. CAUSTIC SODA BOOKLET — Deals with manufacture, its properties, methods of handling and storage, technical data, etc. — ALKALI SALES DEPT., THE DOW CHEMICAL CO., Midland, Mich.

709. STABILON — For Naphtol Dyeing and Printing—reduces cracking and brightens Naphtol shades by stabilizing fast color salts and bases. Prevents premature decomposition of stock feeder solutions and print pastes—fully discussed in booklet available. — AMERICAN ANILINE PRODUCTS, INC., 30 Union Square, New York, N. Y.

713. LIQVATINE ED—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, 61 Van Dam St., New York City.

714. NEW SODA ASH BULLETIN—64-page edition contains both new material and revisions of previously used data covering the subject. Ask for Bulletin No. 5.—SOLVAY SALES DIV., 40 Rector St., New York 6, N. Y.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletin on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and yarn, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

721. SURFAX 1200 — Product data sheet explains this useful wetting and rewetting agent. Described as being water soluble at all temperatures and is a highly concentrated, economical surface active agent.—E. F. HOUGHTON & CO., 302 W. Lehigh Ave., Philadelphia, Pa.

740. RAPIDASE FOR DESIZING—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

788. TRITON X-100—Booklet available describing this highly concentrated detergent and wetting agent. Main uses fully discussed and chemical properties brought out.—ROHM & HASS COMPANY., Philadelphia 5, Pa.

789. TEXTILE SPECIALTIES — Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company formulated to the latest advances in textile chemistry.—AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.

792. DU PONT PEROXIDE BLEACHING SYSTEMS—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

793. TEXTILE CHEMICALS — Buying guide and reference book giving facts about Amalgamated Products, the fabrics on which they give best results, their proper applications and their chemical composition.—AMALGAMATED CHEMICAL CORP., Philadelphia 34, Pa.

795. SURFACE TENSION DEPRESSANT—The Booklet, "Mercerizing and Alkameres—The Ideal Dry" which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

773. TECHNICAL CHEMICAL DATA SHEETS—Complete set for dyeing, printing and finishing operation, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., 100 Warren St., Jersey City 2, N. J.

Handy Return Card ▶

List Booklets You Want, Tear Out and Mail the Attached Card Now!

Please be sure to fill in your Firm's Name and your position on the Coupon. This service cannot be extended to you unless this information is furnished.

Postage Will Be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD
FIRST CLASS PERMIT NO. 502, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 5, GA.

774. **ROYCE TEXTILE CHEMICALS**—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

801. **THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE**—Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

806. **REINER CREELS**—Catalog describing these Single type, Magazine, and Truck creels for all requirements in the knitting and weaving industry. —ROBERT REINER INC., Weehawken, N. J.

818. **FORGED HEAD ALUMINUM BEAMS**—Bulletin 49-A shows new beam capable of holding high yardage of nylon and rubber warps, with specifications. Also describes permanent weld aluminum trioat and section beams.—MILTON MACHINE WORKS, INC., Milton, Pa.

822. **VARIABLE STRIPER**—Booklet available describing Supreme's complete line of Automatic Variable Stripers and Pattern Placer Machines.—SUPREME KNITTING MACHINE CO., INC., 105 Johnson Ave., Brooklyn 6, N. Y.

826. **THE KIDDE KNITTER**—Bulletin describing this newest in Raschel-type warp knitting machines and higher production attained with it.—KIDDE MANUFACTURING CO., INC., Ferrand St., Bloomfield, N. J.

831. **CIRCULAR KNITTING MACHINES** — Brochure pictures and describes the products which can be made on the Brinton small diameter circular knitting machines. Examples of the variety of products which can be made are pictured and the machines described.—H. BRINTON COMPANY, Kensington Ave. and "M" St., Philadelphia, Pa.

SEWING MACHINES . . .

819. **FEED-OFF-THE-CAM FELLING MACHINE** — Bulletin No. 800, illustrates and describes the "Feldlock" with Automatic Lubrication, for lap seam felling on shirts, pajamas, shorts, slacks, etc. —WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING . . .

1003. **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

1004. **PITTSBURGH COLLAPSIBLE CARGO-TAINERS**—Stacked they lock in place and permit visible inventory; collapsed they rest in small area. Base permits entry by all types of lift trucks. Write for brochure MH-13.—PITTSBURGH STEEL PRODUCTS COMPANY, Pittsburgh 30, Pa.

1005. **LANE CANVAS BASKETS**—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. **OVERHEAD HANDLING EQUIPMENT**—56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., 13100 Athens Ave., Cleveland 7, Ohio.

1008. **CASTERS AND WHEELS**—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1010. **CONVEYOR KEY BOOK**—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN CO., 1115 Franklin St., Louisville, Ky.

1011. **TEXTILE TRUCKS**—Booklet describing duff boxes, frames and trucks, yarn, waste, platforms, conditioning, sliver lap, fiber, utility trucks, etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1012. **"SERVES YOU RIGHT"**—In theme of succinct review of forklift trucks, powered hand trucks and industrial towing tractors, with emphasis on proper planned materials handling systems, which can be obtained from CLARK EQUIPMENT CO., Industrial Truck Div., Battle Creek, Mich.

1013. **"A STORY OF TRACTOR TOOLS AND THEIR USE."**—Comprehensive illustrated guide effectively present in cartoon-style the many principal uses for this type of Equipment.—HYSTER CO., 2903 N. E., Clackamas St., Portland 8, Ore.

1027. **SINGLE-BEAM CRANES** — Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1030. **COF RECEPTACLES** — This 23-page catalog, R-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete descriptions and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

1032. **ELECTRIC CHAIN HOISTS**—Bulletin 853 describing Robbins & Myers Type "JC" Electric Chain Hoists. Capacities 500, 1000 and 2000 pounds. —ROBBINS & MYERS, INC., HOIST & CRANE DIV., Springfield, Ohio.

MISCELLANEOUS . . .

1101. **AUTOMATIC BOBBIN REFINISHER**—A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2200 N. 30th St., Milwaukee, Wis.

1102. **BALING PRESSES**—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. **UNBRAKO SCREWS**—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1107. **AUTOMATIC QUILL POLISHER**—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2200 N. 30th Street, Milwaukee 10, Wis.

1108. **FABRICATION OF U. S. STAINLESS STEELS**—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosive-resistance tables for chemicals.—CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1111. **BRUSHES**—A 24-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. **THE RANDOM WEB PROCESS**—Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cut-away diagrams.—CURLATOR CORPORATION, Textile Division, 56 Blossom Rd., Rochester, N. Y.

1113. **MACHINE KNIVES** — Catalog and price sheets describing this company's line of knives for use on textile machinery. TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1115. **TEXTILE WRAPPING MACHINES**—Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made.—HAYSSEN MANUFACTURING CO., Sheboygan, Wis.

1117. **CUSTOM MADE THREAD GUIDES**—Illustrated booklet describing uses and physical properties of the "Alsimag" line of Thread Guides. Advantages fully discussed with picture and specifications of each type.—AMERICAN LAVA CORP., Chattanooga 5, Tenn.

1122. **BALING PRESSES**—Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished goods, textile fibers, wool, and waste of all kinds.—LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

1123. **CHROMIUM PLATING**—New booklet tells how Walhard engineered hard chromium plating service works for industry. Walhard's capacity to produce, controlled quality, and economical operation are discussed along with pictures of the operations.—WALTON & LONSBURY, Attleboro, Mass.

MARCH, 1953

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....

.....

.....

Please send more information on advertisements (give Page numbers)

.....

.....

Reader comment on this issue : Valuable ( ); Fair ( ); No Good ( )

Name ..... **Position**.....

Company Name .....

Address .....

City ..... **State**.....

◀ Handy Return Card

USE THIS OPPORTUNITY TO INFORM YOURSELF OF CURRENTLY AVAILABLE LITERATURE DEALING WITH MACHINERY, EQUIPMENT AND SUPPLIES FOR TEXTILE MILLS. FILL OUT THE ATTACHED CARD TODAY.

Thread Cutter

(Continued from page 85)

type loom are: Light weight, fewer adjustments, cuts and holds all types of yarn, less down time for replacement, positive opening and closing, dropping end when open is assured, simple construction, longer service without adjustment, one set of parts.

E. H. Jacobs Northern Division, The Bullard Clark Co., Danielson, Conn.

For additional data, request item C-129, using Handy Return Card on page 200.

NEW Equipment AND MATERIALS

Other items are described on pages 83 and 85

Size for "Dope-Dyed" Yarns, Other Synthetics

Polyco 497 is a colloidal water-dispersion of a polyvinyl acetate copolymer, which deposits films of exceptional clarity and water resistance. These films can, however, be readily dissolved in dilute alkalis or ammonia—a property valuable for treatment of paper products, non-woven fabrics, etc., since the fiber may be recovered by an alkaline treatment.

For textile finishes, the use of metal salts to insolubilize the free carboxyl groups will help to render such finishes resistant to removal by alkaline builders during laundering. The excellent adhesion, flexibility, and toughness of the films produced by the product suggest its use for sizing nylon, Dacron, Orlon, Acrilan, as well as rayon. The resistance of neutral Polyco 497 films to water-spotting makes it especially suitable for sizing of "dope-dyed" or "Chromspun" yarns for "loom-finished" fabrics.

Another new product by this manufacturer is Polyco 426, a linear terpolymer in aqueous dispersion. Tertiary amine groups attached to the main polymer chain impart outstanding adhesive properties to the resin. Addition of the product to other resin dispersions, such as butadiene-styrene lattices, improves their adhesion to synthetic fibers and glass. Mixtures with water-soluble resorcinol-formaldehyde resins markedly increase the adhesion of synthetic latex films to synthetic fibers.

American Polymer Corp., Peabody, Mass. (C-215).

New Roving and Spinning Drafting Elements

The F-5 Drafting Element for Roving is characterized by its extreme versatility and by the increased flexibility of fiber control which is obtained over the fibers. The unit has a maximum roll spread of 9" and can handle most worsted and synthetic fibers commercially available.

Like the Shaw system of fiber control, it employs an apron passing over an apron bar and bottom roll, in conjunction with a single top roll.

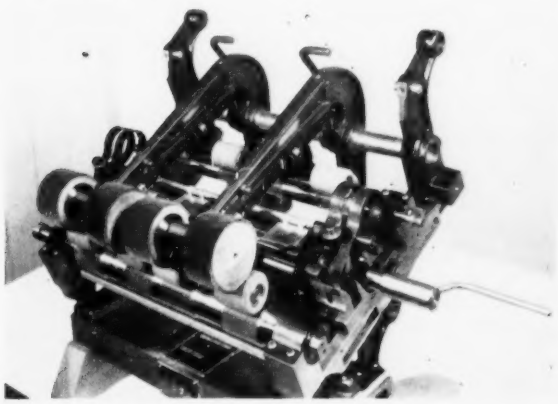
The problem of lap-ups on the front bottom roll has been virtually eliminated by the utilization of a roll of large diameter—1 15/16". The circumference of this roll is long enough to prevent the fibers from wrapping around and becoming entangled if a lap-up should occur.

The drafting element is equipped with anti-friction bearings for all rolls, both top and bottom. The top rolls are of the Saco-Lowell Torrington anti-friction construction and are self-aligning. The use of the center support of the top roll has eliminated the necessity for cap bars. Pressure is applied on front and back cushion rolls by a spring which transmits its pressure through the horn which forms the main roll support.

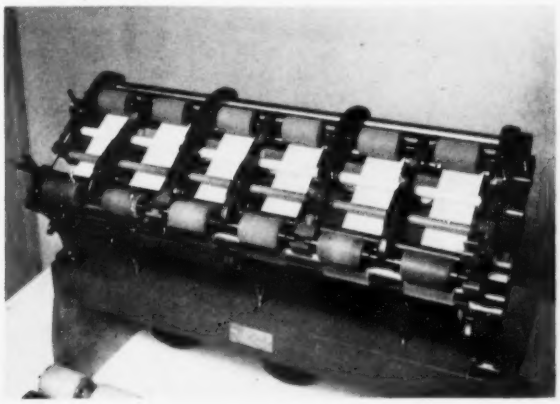
A modification of the Saco-Lowell Z-2 drafting element, which was designed for spinning from 1½" to 3¼" staple, is now being manufactured and has a range of staple of from 1½" to 5¾". Designated the Z-5 drafting element, it is available on new frames or may be easily applied to existing frames as a change-over.

The distinguishing feature of the

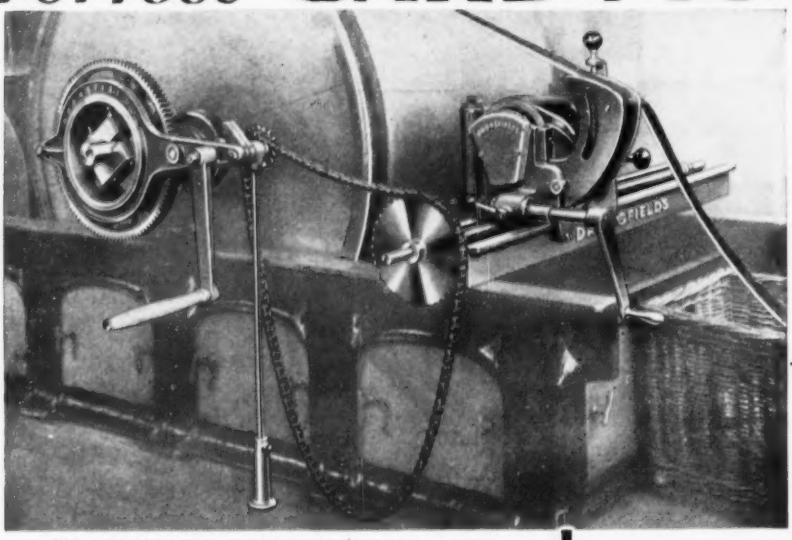
Saco-Lowell's F-5 drafting element for worsted and synthetic roving.



Z-5 drafting element for spinning 1½ to 5¾" staple fibers (Saco-Lowell).



Perfect CARD MOUNTING



for
COTTON
WOOLLEN
WORSTED
WASTE
ASBESTOS
CARDS

Card Mounting Machine Nº 220 with Double Purchase Jack *for* clothing Card Cylinders and Doffers

SOLE AGENTS FOR DRONSFIELD'S MACHINERY:—
JOHN HETHERINGTON & SONS INC.
N. MARIETTA ST. EXT., GASTONIA, N.C.

DRONSFIELD BROTHERS LTD · OLDHAM · ENGLAND

Complete FACTORING Service

Next door to every MILL in the SOUTH

Factoring Division
TRUST COMPANY OF GEORGIA
ATLANTA, GEORGIA

MEMBER: FEDERAL RESERVE SYSTEM • FEDERAL DEPOSIT INSURANCE CORPORATION

Z-5 over previous standard Z systems has been the adoption of a secondary or auxiliary apron bar. This apron bar or shelf is placed between the middle roll and standard apron bar and serves to support the apron for the wider settings.

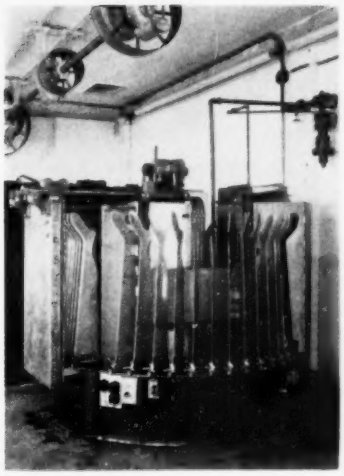
Cleaning and maintenance requirements have been minimized.

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

For additional data, request item C-101, using Handy Return Card on page 200; specify F-5 or Z-5.

NEW Equipment AND MATERIALS

Combination Preboarding and Finishing Machine for Full-Fashioned Hose



Arbach combination preboarding and finishing machine for hosiery.

The "Arbach 250" machine combines preboarding and finishing of full-fashioned hosiery in the same unit. This machine is of a circular design with a preboarding chamber and a finishing chamber mounted opposite to each other on a circular ground metal plate with supports for the forms. Drives, guiding mechanism, and heating pipes are all mounted in the middle of the machine, which occupies only 4 square meters.

The operation of the machine is entirely automatic and is controlled by a timing device. It is provided for four sets of 12 easily exchangeable stocking forms each. Twelve forms are dressed for preboarding and 12 forms for finishing. The forms move then into the preboarding and the finishing chamber respectively. During preboarding and finishing of these two sets, two other sets on the opposite side of the chambers are dressed. After the expiration of the preboarding time, the door of the preboarding chamber opens automatically and the forms with the preboarded and finished stockings move back again into their original position, drawing the other sets of forms into the preboarding and finishing chambers. The machine operates, therefore, in a pendulum movement and is recommended if the stockings are at first to be preboarded, then dried, and after drying, finished.

Assuming a preboarding time of three minutes, the production of the machine will amount to 80 dozen pairs of preboarded and 80 dozen pairs of finished stockings in an eight-hour day; at two minutes it will amount to 120 dozen pairs of preboarded and 120 dozen pairs of finished stockings.

Another type of combined preboarding and finishing machine, the "Arbach 250-III," operates in a continuous circular movement. The forms are dressed, move into the preboarding chamber, after preboarding immediately into the finishing chamber, and are then stripped and dressed once more. This type is designed for stockings to be preboarded and finished after dyeing.

Maschinenfabrik Arbach, G. Grozinger, Reutlingen, Germany.

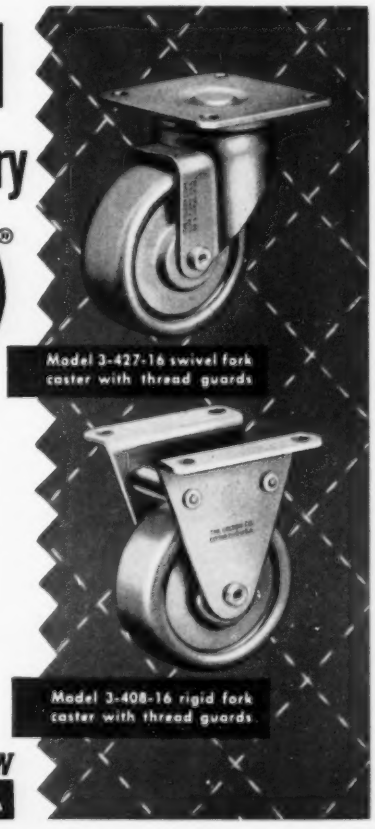
For additional data, request item C-125, using Handy Return Card on page 200.

Cot Combats Eyebrowing, Requires Less Buffing

Spinning room labor and cot costs can be reduced and at the same time yarn quality increased by the use of the new Dayco Cot, EW-465. Besides successfully combatting eyebrowing, this new cot drafts better quality yarn, requires fewer cleanings of the clearer boards, and runs longer between buffings.

Outstanding performance of these cots is attributed to the addition of

Designed by the Textile Industry built by Colson®



Our friends in the Textile Industry worked with us in developing casters and materials-handling trucks to meet their needs—*exactly*. The result is a line of casters, hand trucks, platform trucks, box trucks, and drum and barrel trucks that can add extra efficiency to any mill operation. COLSON Casters roll easily over all floors, swivel freely, are rust resistant. Many models have thread guards. Write us or consult the yellow pages for the COLSON office near you.

Write for free catalog—
"COLSON Trucks and Casters"

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS · LIFT-JACK SYSTEMS · INDUSTRIAL TRUCKS

THE STARCH

USED IN A

WELL BALANCED

WARP SIZE

REFLECTS THE INTEGRITY
OF THE PRODUCER

CLINTON CORN STARCH

HAS THE QUALITY WHICH

MAKES IT

A SOUND BASIC INGREDIENT

FOR

BETTER SIZING

AND

WEAVING

CLINTON

CLINTON FOODS INC.

CORN PROCESSING DIVISION

CLINTON, IOWA

If Your Product Is Made In—

• FABRIC FORM
• RIBBONS
• SHEETS
• CORDS

This

"MAGIC" BOX

may be what you need.

LOD-CAP

SUPPORTS *ONE* END OF AN IDLER ROLL—

MEASURES TENSIONS

in lbs. pull on remote dial.

Can be installed on any present idler roll and may be mounted in any plane. It's self-contained, small size, easily installed.

AUTOMATIC CONTROL FOR CONSTANT TENSION

This "LOD-CAP" Automatic Control can be added for single or multiple units without changes to remote reading indicating circuit.

Operates on 60 lb. Minimum Air Pressure
No Electric Circuits or Wiring

LOW COST—WIDE LOAD RANGE

Simplicity of construction keeps cost down. Load ranges from 0-1 lbs. to 0-12,000 lbs. make LOD-CAPS adaptable to many varied industries.

Write for Data File J3

Open territories available to representatives.

Link ENGINEERING COMPANY
13843 Elmira Detroit 27, Mich.

Ibrocol to the composition of the cot. Its chemical and mechanical action gives to the cot a surface that maintains just the right coefficient of friction to remove only the short staple fibers and transfer them well back under the clearer board. Long staple fibers that could build up into eyebrows are left in the yarn.

The addition of Ibrocol also retards slicking and glazing.

Dayton Rubber Co., Textile Division, Woodside Bldg., Greenville, S. C.

For additional data, request item C-120, using Handy Return Card on page 200.

Portable Conveyors, Live Roller and Belt Types

The roller surface of a portable live roller conveyor recently announced makes this unit suitable for a sorting table. The steel rollers make it easy to move commodity from side to side or to slide for loading or unloading. This unit can be coupled to the portable belt conveyor or to another portable live roller. It is customary in the case of an incoming commodity line to have one or more of these portable live rollers spaced as required between a series of portable belts.

A new portable belt conveyor is of rugged construction, being designed for conveying miscellaneous commodities. The elevation is adjustable by means of a series of holes in the supporting legs. The length can be made to suit particular requirements from a recommended minimum of 10'-0" to a recommended maximum of 25'-0". The width can also be made to suit requirements from a 12" wide belt to a 36" wide belt. The carrying surface is above the side frames and supporting framework, permitting a commodity to be carried that is wider than the conveyor itself. A long continuous conveyor can be made up by coupling two or more of these units together.

Standard Conveyor Co., North St. Paul 9, Minn. (C-226).

Product Treats Boiler and Cooling Water

"Borgana," a liquid extracted from red cedar wood, successfully treats boiler water and cooling water in refrigeration and air conditioning systems and other units where scale and corrosion difficulties occur.

By simply adding approximately one quart of "Borgana" per 100 hp per week, complete boiler treatment is obtained. The existing scale is softened and gradually removed, and further scale formation prevented. Borgana will absorb oxygen and other corrosive gases commonly found in boilers, thereby eliminating corrosion and pitting. It also reduces or eliminates foaming and embrittlement.

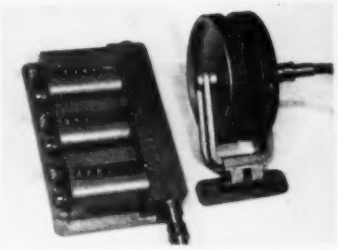
Features of the product are the elimination of complicated boiler water tests, simplicity of use, no danger from over-treating, reduction of corrosion, and the elimination of scale in boilers, traps and valves.

Strong, Carlisle & Hammond Co., Cleveland 13, Ohio (C-242).

NEW Equipment AND MATERIALS

Three Measuring Counters for Special Applications

Features of an improved twin-wheel measuring counter, called the "Torpedo," for piece goods are: Counterbalanced mounting permits the entire assembly to be lifted out of action and reduces vibration while in operation; counter shaft is independent of measuring wheel shaft, both being connected by chain and sprocket drive; wheel shaft runs in double ball bearings; measuring wheels are 18" in circumference; unit can be mounted to existing rod through the two holes provided in the upper base and thus can be carried along the rod.



Trumeter triple counter unit.

A batching unit recently placed on

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of

LABOR — EQUIPMENT — MATERIAL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"We most highly recommend the American Associated Consultants. We think this service is very worth while."

AN IMPORTANT WOOLEN MILL

Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles," and our booklet "A Fair Day's Pay and in return A Fair Day's Work".

AMERICAN ASSOCIATED CONSULTANTS, Inc.

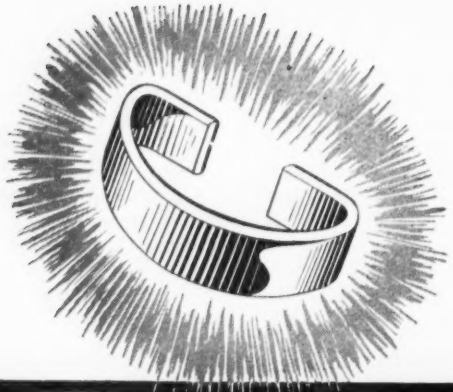
D. S. KEOGH, President
J. J. SKELLY, Vice Pres. and Gen. Mgr.

H. B. CRAFT, Vice President
in Charge of Southern Operations

250 PARK AVENUE
NEW YORK 17, N. Y.

GRANT BUILDING
PITTSBURGH, PA.

30 CAMDEN ROAD
ATLANTA, GA.



DARY
Ring Travelers

EVERY DAY IN EVERY WAY...

The only way we know of improving your daily spinning and twisting operations is to keep everlastingly on the lookout for *better* methods.

One good place to start is your everyday traveler problems. The fine quality and sturdy service given by Dary Ring Travelers could mean improved production for you. Why not call a Dary representative now?

THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS

LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD RHYMER, BOX 2261, GREENVILLE, S. C.

"NATIONAL"
MODEL G
AUTOMATIC PIECE GOODS DRYER and CURING OVEN

Previous models of "NATIONAL" dryers of this type have successively advanced the efficiency, speed and economy of piece goods drying, with each new design offering greater production and quality rewards to finishing plants and departments. In this latest model, an even higher investment return is assured, through additional improvements in design, construction, operating and control elements.

NEW "INSUL-POLE" CONVEYOR . . . The patented rotating-expanding conveyor poles are made of a special heat-resisting composition. This "INSUL-POLE" was produced by "NATIONAL" to provide greatly increased service life for the conveyor at the higher temperatures required by modern processing developments.

COMPLETELY ENCLOSED ENDS . . . to assure minimum heat loss, and to prevent escape of noxious fumes in resin curing. HEAVIER CONSTRUCTION . . . including improved and heavier driving mechanism. IMPROVED AIR CONTROLS . . . to accomplish uniform air distribution in the new *wider* machines.

DUPLEX CONVEYORS . . . The new MODEL G Dryers can be furnished with two independently operated and controlled conveyors in the same drying system. This permits two runs, of light and heavy goods, at two different speeds.

HEATING . . . May be steam, steam with gas booster, gas, electric or other mediums.

Write for New Illustrated Pamphlet

THE NATIONAL DRYING MACHINERY CO.
LEHIGH AVENUE and HANCOCK STREET
PHILADELPHIA 33, PENNA.

New England Agent: INGALLS ENGINEERING CO.—Providence, R. I.
Southern Agent: F. W. WARRINGTON—Charlotte, N. C.

DRYING AND CONDITIONING MACHINERY FOR TEXTILES, CHEMICALS, CERAMICS, ETC.

the market consists of two counters, one adding and the other subtracting alternately. At the end of each cycle a contact can be made or broken. The unit can be supplied with revolution, stroke or magnetic movements.

A triple counter switch-over unit now available consists of three revolution counters fitted on a common drive. The two switch-over counters work as follows: Each counter has a clutch lever, and both of these are fitted together. One counter goes into gear and the other comes out (this can be done while the machine is running). When a seam comes through the measuring machine, the operator who sees the seam simply moves the operating lever of the counter slightly up or down, and one counter functions while the other remains idle. The operator reads the measurement, sets the counter back to zero, and awaits the next seam to repeat the operation. The third counter totalizes either the entire piece or the day's production.

Trumeter Co., 1265 Broadway, New York 1, N. Y.

For additional data, request item C-130, using Handy Return Card on page 200.

Up to 420 Picks Per Minute with Shuttleless Loom for Narrow Fabrics

Speeds up to 420 picks per minute regardless of the width of the ribbon or webbing (up to approximately 2⅜") are obtainable with an Italian narrow fabric loom recently introduced. Known as the SITAM 3 A 60, the automatic shuttleless machine is suitable for weaving heavy and medium industrial webbings as well as finer ribbons from silk, rayon, nylon, cotton, flax, jute yarns, etc.

Each loom has three 3 A 60 heads securely fixed to the plane so as to form a complete unit having all its parts easily accessible. Each head is entirely independent of the other two and can weave an entirely different fabric; each head can operate and stop independently of the other two.

The batten, of the oscillating movement type, is constructed of high resistance light alloy, and by means of the strong thrust imposed by two cranks located one on each side of the head, it permits the weaving of heavier webbings with a high number of picks per inch.

Warp and filling yarns are supplied from large packages. Feed control is obtained by means of a special friction device which permits a micrometric advancement from 6 to 101 picks through the simple movement of a cursor. Hand feeding of the ribbon may be accomplished with a handwheel.

Harnesses are operated by grooved cams fitted into the body of each head, the maximum number of harnesses and cams for each head being 12. Cams can be easily and quickly fitted on one or two sleeves as required.

Warp and filling stop motions are provided on each head.

Rappresentanze Estere Materie Industriali (REMI), Vittorio Emmanuele 31, Milano, Italy.

For additional data, request item C-109, using Handy Return Card on page 200.

NEW Equipment AND MATERIALS

High Speed Sueding Machine for Variety of Fabrics

A new sueding machine, Type "Wagner," is equipped to suede-finish a variety of fabrics with the grain, as well as against the grain, at a linear fabric speed of about 30-33 fpm.

Besides the Atlas and Simplex fabrics, it is possible to finish interlock fabrics. A thin, yet dense surface will give the fabric a "soft hand" which will increase its popularity for underwear garments. Tricot fabrics with laid-in thread are also suitable for an excellent suede finish.

In the heavier fabrics, the suede surface finishing produces a softness that is especially suitable for outerwear fabrics. Even woven fabrics for all purposes, including the finest moire, obtain a softness and attractive appearance by the sueding

are more and more executives of leading textile mills investigating the "Dry" Humidification System?

Because they secure important advantages which include:

- Uniform humidification. No spotty areas.
- Operating on the principle of molecular suspension, it produces humidification 500 times finer than spray.
- Automatic blending of outdoor and indoor air.
- Provision for complete air conditioning if desired.
- Significant fuel savings during heating season.
- Generally speaking, it is adaptable wherever hygroscopic material is stored or processed.
- Ceiling suspended platform installation available.

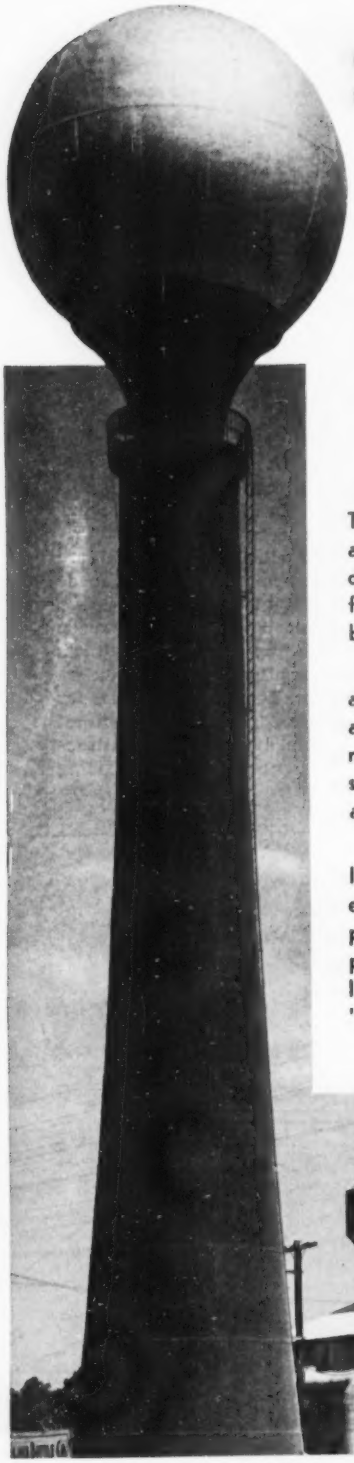
Write for illustrated booklets.

AIR-PERME-ATOR MFG. CO.

"Dry" Humidification System

300 PREAKNESS AVENUE PATERSON, NEW JERSEY

Southeastern Representative: Lucas Associates, Inc., Box 1696, Charlotte 1, N. C.



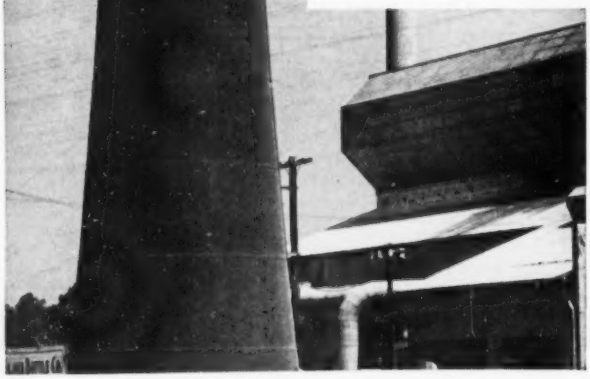
SPHERICAL TANKS ON TUBULAR TOWERS

The COLE Spherical Tank on Tubular Tower is a pioneer in its field. We designed and erected the first tank of this character built.

This design provides an attractive and serviceable unit—economical to maintain, efficient in service and pleasing in appearance.

Write for special booklet on these modern welded Spherical Tanks which provide gravity water pressure, and for copy of latest COLE catalog—"Tank Talk."

•

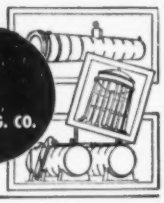


Established 1854

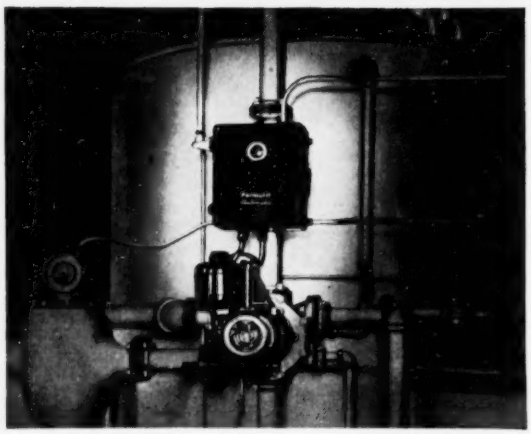
R. D. COLE MFG. CO.

NEWNAN, GEORGIA

ELEVATED TANKS • VESSELS • CYLINDERS
TOWERS • BINS • STANDPIPES



SYNTHETICS DEMAND IT!



Permutit Water Conditioning Equipment

Getting synthetics to take a dye is tough enough without worrying about proper boil-off of the gray goods, maintaining the shade of the dye and providing a really good final wash and rinse.

For best results, synthetics require a plentiful supply of clear, soft water throughout the dyeing operation.

That's why Permutit Fully Automatic Water Softeners are in such demand! They offer a fast, sure and inexpensive means for producing water of zero hardness, free of damaging impurities. Moreover, Permutit Automatic Controls assure you of a constant supply, save operator's time and eliminate the danger of human errors.

Better write today for full information. THE PERMUTIT COMPANY, DEPT. TI-3, 330 WEST 42ND STREET, NEW YORK 36, N. Y., or Permutit Company of Canada Limited, 6975 Jeanne Mance St., Montreal.

WATER CONDITIONING HEADQUARTERS FOR OVER 40 YEARS

PERMUTIT®

NEW Equipment AND MATERIALS

process which also can be used on the reverse side of fabrics such as plush to impart a softer "feel."

Alfred Hoffman & Co., 629-635 Fifty-ninth St., West New York, N. Y.

For additional data, request item C-113, using Handy Return Card on page 200.

Fiber Glass Color Tubs Can Be Repaired in the Plant

Color tubs in a range of stock sizes for the textile industry are now molded from fiber glass. Of extremely light weight (26-gallon container weighs only 14 lb), the tubs are non-corrosive, electrically non-conductive, and non-toxic. They withstand temperatures well above boiling point and are smooth-surfaced inside and out for easy cleaning. Color of the tubs is permanently impregnated in the material.

High resistance to impact and hence the ability to withstand considerable wear and tear on the job is another advantage of the tubs. In case damage does occur, they can be quickly repaired on the spot, at room temperature, by unskilled labor using a simple repair kit supplied by the maker.

The tubs can be closed containers, if desired, to withstand high pressures. Stock sizes are in capacities of ten, twenty-five, and forty gallons. Special sizes may be made to order.

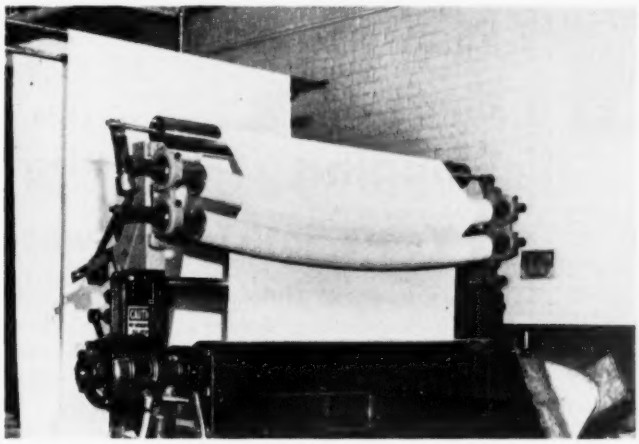
Laminex Corporation, 994 Jefferson Street, Fall River, Mass.

For additional data, request item C-114, using Handy Return Card on page 200.

One-Bath Scour and Dye System for Nylon Hosiery

A one-bath scour and dye system for nylon hosiery is named the Siddons Process. The new system is said to offer results equal to conventional two-bath processes without sacrificing production quality.

Basically a three-step process of about 90 minutes duration, it uses



Slack Selvage Eliminator Used in Shearing Cloth

A Mount Hope slack selvage eliminator is shown here mounted on a Hermas AV 4 knife shear, to take up slack selvages and spread the cloth evenly while it is being sheared. Through arrangement with Mount Hope Machinery Company, this device is now available for installation on new AV shears at the Hermas factory.

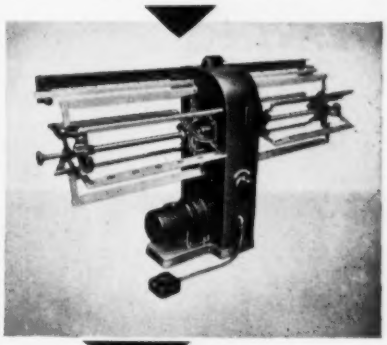
Hermas Machine Company, Warburton Avenue, Hawthorne, N. J.

For additional data, request item C-115, using Handy Return Card on page 200.

INCREASE

operator productivity

25% to 100%



Fidelity

SKEIN REELER

offers these improvements

- √ Automatic skein-weight control
- √ Variable speed control
- √ Free-end collapsible reels
- √ Adjustable reel size
- √ Adjustable yarn traverse
- √ Automatic brakemotor
- √ Pedal brake release
- √ Push button start-stop switch
- √ Electric Stop Motions
- √ Enclosed drive, safe, compact
- √ Universal yarn creels

ADVANCED DESIGN BOOSTS ECONOMIES

New design makes this high-speed Fidelity Skein Reeler so easy to run that one operator can handle several machines. Automatic features increase labor productivity 25% to 100%. Space-saving double end (as shown) and single end models available for cotton, nylon, rayon, silk, wool and worsted yarns, tapes, and laboratory uses.

Job-proven in top mills, Fidelity Skein Reelers outperform all others. Get the brochure on this first radical development in reeling machinery in over 40 years, or simplified production charts to analyze your own reeling operation.

Manufacturers of intricate precision machinery since 1911

FIDELITY MACHINE COMPANY INC.

3912 Frankford Ave., Phila. 24, Pa., U. S. A.

FOR KNITTING OR WEAVING

Insist on

AMERICAN & EFIRD YARNS

AMERICAN DURENE®
As advertised in leading magazines

NATURAL YARNS
Combed Peeler or Sak, 10's-90's Single
Combed Peeler or Sak, 10's-100's Ply
Carded Peeler, 8's-30's Single

THREAD DIVISION
LAWRENCEBURG, KENTUCKY

AMERICAN & EFIRD MILLS, INCORPORATED

Mount Holly, North Carolina • **W. H. SUTTENFIELD**, Vice-President and Sales Manager

Successors to American Yarn & Processing Company and Efird Manufacturing Company

MOUNT HOLLY, N. C.
Mr. C. E. Wood
Miss E. R. Abernathy
Mr. T. J. Davis

HIGH POINT, N. C.
Mr. E. J. Holbrook

CHATTANOOGA, TENN.
Mr. H. W. Davenport
728 James Bldg.

BOSTON, MASS.
Mr. L. T. Howick
222 Summer Street

PHILADELPHIA, PA.
Mr. Wm. Montgomery
3701 N. Broad Street

ALBEMARLE, N. C.
Mr. A. K. Winget

CHICAGO, ILL.
Wood & Hutchinson
222 W. Adams Street

GASTONIA, N. C.
Mr. T. C. Smotherman

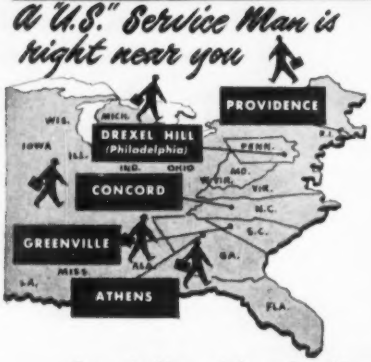
NEW YORK, N. Y.
51 Madison Avenue

ANNISTON, ALA.
Mr. Horace Frierson

ALSO SYNTHETICS AND WORSTED YARNS

U. S. RING TRAVELERS

A "U.S." Service Man is right near you



When a U. S. Representative visits your mill, he offers a world of useful data on MODERN traveler practice — plus the finest travelers it is possible to produce.

Prompt shipment from Providence, Greenville

U. S. RING TRAVELER CO.

HOME OFFICE & FACTORY: PROVIDENCE, R. I.
SOUTHERN OFFICE & WAREHOUSE: GREENVILLE, S. C.

Write, wire or phone nearest office.

W. P. VAUGHAN, W. H. ROSE—Greenville, S. C.—Box 1048—Phone 3-0915
O. B. LAND—Athens, Ga.—Box 1187—Phone 478
L. H. MELLOR, JR.—Mid-Atlantic States—123 Treaty Rd.—Drexel Hill, Pa.—Phone Hillton 6-1563
H. R. FISHER—Concord, N. C.—Box 83—Phone 8366
H. J. SMITH—Providence—Box 1187—Gaspee 1-0100

Dismantling Crating & Shipping

All Kinds Textile Machinery

24 Years Satisfying Owners

We'll handle all of the machinery in your mill, or as few machines desired . . . shipping them to any designated place in the U. S. or Canada, or prepared for export . . . rendering expert service built up over a period of 24 years.

Our development of a "Floating" Technique eliminates practically all breakage of equipment from sudden shocks during shipping.

We do everything but re-erecting at destination, supplying all labor, material and necessary insurance. We will gladly discuss your problems with you without obligation. Call or write

JOSEPH M. LASSONDE

Tel. 2-3141 142 Second St. Fall River, Mass.

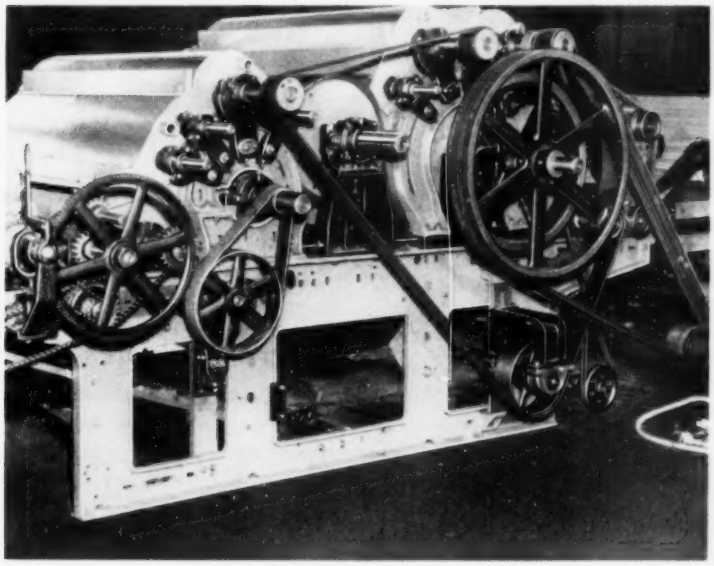
NEW Equipment AND MATERIALS

Evenate OBX as a dye leveling agent and Alkamine OBX for a detergent. Three loadings per eight-hour day are possible.

According to the company, extensive mill tests have shown satisfactory dyeing results. Colors are true and even with excellent union between the multifilament welt and monofilament boot. Dirt and oil are held in solution, preventing "oil lakes" on the finished hosiery. Appreciable savings in water, steam, and labor have been noted in plants using the new process.

Amalgamated Chemical Corporation, Ontario and Rorer Streets, Philadelphia 34, Pa.

For additional data, request item C-126, using Handy Return Card on page 200.



James Hunter Model 40 garnett has fewer rolls.

High-Production Garnett for Short Fiber Stock

A simplified garnett, the Model 40, for high-speed processing of cotton, jute, and synthetic fibers exceeds today's production standards while reducing operating and maintenance costs. Production as high as 575 pounds per hour on some fibers, with quality carding, has been attained.

The machine has only eighteen rolls and cylinders. Worker and stripper rolls have been reduced in number to one each per cylinder. This means fewer rolls to "spindle out," to reclothe, and fewer bearings and poppets to replace. All cylinders are balanced. With balanced rolls revolving on ball bearings, gauging troubles are eliminated. Feed rolls are equipped with Oilite bushings requiring no lubrication, eliminating ever-present danger of oil on stock.

The high production is accomplished by a larger diameter worker, a stripper, and an additional high speed fancy on the finishing cylinder, all revolving opposite to main cylinder. These three high speed fancy rolls provide necessary carding to accomplish increased production consistent with quality equal to or better than that of existing equipment. By raising the center doffer above the two main cylinders the stock is carried only one third the circumference of the doffer instead of two thirds as on standard machines. The position of doffer above main cylinders eliminates draft below the web which in turn means less stock dropped in transfer from one main cylinder to another. The overhead location of the middle doffer allows quick removal for reclothing.

In addition to an increase of 50% to 100% in production with as good or better carding, a major advance of the new design is its ability to

Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields.

TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.

WE'RE SAVING MORE THAN 50% ON OUR LOOM LEATHER COSTS SINCE WE SWITCHED TO BONDARON

Hundreds of mill operators have found by actual experience that the *most economical* leathers to use are the *finest they can buy*—which, of course, means

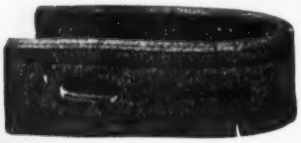
ORIGINAL and GENUINE
"The Leather with the Hair on"

Bondaron
REG. U. S. PAT. OFF.
TEXTILE LEATHERS

Why not try them on your own looms?

SEND FOR BOOKLET 303

Lug Strap



Loop Picker

Harness Strap

Check Strap

CHARLES Bond COMPANY
617-623 ARCH STREET PHILADELPHIA, PA.
Manufacturers of Textile Leathers for Nearly Half a Century

Sterling Ring Travelers

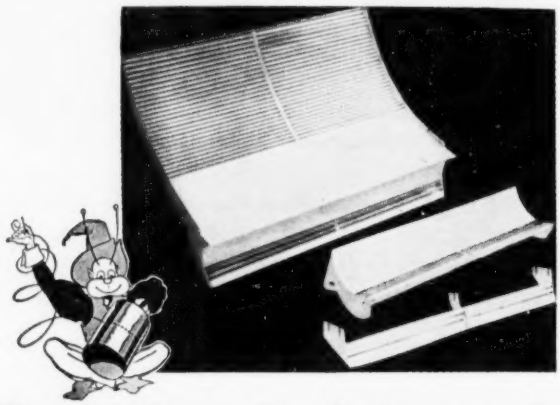
CHANGES

Have you made any changes in your spinning or twisting? Are your conditions the same?
In either case, it would be advisable to check the travelers.

SEE OUR ENGINEERS

M. H. CRANFORD
Box 204 Chester, S. C.
D. R. IVESTER
Box 882 Clarksville, Ga.
J. S. FURTADO
Box 803 Fall River, Mass.

STERLING RING TRAVELER CO.
FALL RIVER, MASS.



Check Your Card Screens!

You can't produce top grade products without precision fitted Screens. SIMS is equipped to repair your re-usable equipment or to furnish you with replacement parts. Check your equipment now . . . then call SIMS.

REPLACEMENT PARTS available from stock. Spinning Cylinders. Spinning Cylinder Heads and Arbors. Card Screens. Picker Screens.

Sims METAL WORKS
WEST POINT, GA.

NEW Equipment AND MATERIALS

handle low grade and short fiber stock. Tests to date show it is possible to run cardroom sweeps, picker waste, fly, motes, and linters.

A slightly modified version, Model 40-S, is designed for synthetic fibers such as Dacron, nylon, Orlon, rayon, Vicara, etc.

James Hunter Machine Co., North Adams, Mass.

For additional data, request item C-116, using Handy Return Card on page 200.

Want More Information on These Items?

Write key number (C-401, etc.) in appropriate space on Handy Return Card on page 200, and drop card in mail.

Dry atmospheres for protection, processing or drying of moisture-sensitive materials, testing materials, and conditioning of air for human welfare are produced by apparatus which operates on principle of "Liquid Contact Method." Spray liquid either adds moisture or removes it by absorption or by condensation.

Niagara Blower Co. (C-311).

Fluorescent fixture for plants with high ceilings, in addition to directing maximum light down from the ceiling, allows about 15% of upward light to dispel shadows at the upper ceiling level. Designated the "Airliner" fixture.

Colonial Electric Products Corp. (C-312).

Pipeline flow monitor, the Potter "Max-Alarm" system, is designed as a safety or warning device for processes or equipment where the flow of toxic or highly corrosive liquids, viscous fluids, liquefied gases, through a pipeline is not to exceed a given value.

Potter Aeronautical Co. (C-313).

Fractional hp variable speed right angle drive is available in either horizontal or vertical models with speed ratios from 2:1 through 10:1. Can be mounted flat against, directly above or below the driven machine, saving floor space.

Reeves Pulley Co. (C-314).

Liquid static eliminator called Plastic Bath can be incorporated in warp sizing and dyeing and finishing solutions to remove static charges from synthetic yarns and fabrics. Can also be applied to filling yarns prior to winding onto loom bobbins.

Globe Laboratories (C-315).

Industrial luminaire, type SDP, provides more comfortable seeing conditions by means of an upward component which distributes 23% of the light towards the ceiling, eliminating severe contrast between bright luminaires and dark ceiling.

Westinghouse Electric Corp. (C-316).

Table model humidifier for office or home use evaporates into the air better than three gallons of water per 24-hour day, enough to properly moisten air of three or four average-sized rooms. Can be used with any type of heating.

Walton Laboratories, Inc. (C-317).

Feeder comb of saw-toothed stamped aluminum construction for Saco-Lowell F-2, F-5, F-5-S, and F-7 feeders provides better preliminary opening and more production without increasing power consumption. Speeds up to 280 strokes per minute. For new or existing feeders.

Saco-Lowell Shops (C-318).

Viscosity measurement continuously and automatically in as many as 16 kettles, reactors, or pipe lines at temperatures up to 650 F and pressures up to 1000 psi is possible with the Model MP Multi-Probe Ultra-Viscoson system.

The Ultra-Viscoson Corp. (C-319).

Pedestal sewing machine mountings for Union Special lockstitch and 50000 series flat bed machines save floor space, provide more comfortable and convenient working position for operator, and are readily adaptable to any production system layout.

Union Special Machine Co. (C-320).

Don't Guess!

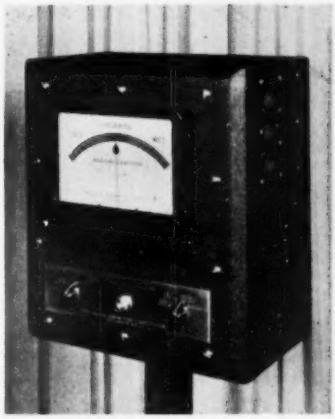
KNOW

THE

Moisture Content

OF YOUR

WARP OR FABRIC



MOISTURE MONITOR

is more than

99% Accurate

This amazing, low-cost electronic device ends the "rule of thumb" in the operation of your slasher. Easy-to-read gauge shows at a glance the true moisture content of your warp or fabric: helps speed production while protecting quality.

Moisture Monitor has been tested and proved in many of the South's largest plants. Whether your plant is large or small, Moisture Monitor will save you time and money. Let us send descriptive literature.

Write or Wire Today!

STRANDBERG

ENGINEERING LABORATORIES

416 W. Market St.
Greensboro, N. C.

CARTER TRAVELERS

A modern, metallurgical laboratory plays an important part in the maintenance of the absolute uniformity of the weight, temper and shape of CARTER TRAVELERS. These same technicians are constantly at work improving CARTER TRAVELERS to meet the demands of higher spindle speeds and new fibres.

You can depend on CARTER TRAVELERS keeping pace with every new development in the textile field.

CARTER TRAVELER COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA N. C.

REPRESENTATIVES

R. A. Haynes, Special Representative	114 W. Fifth Ave., Gastonia, N. C.
W. L. Rankin	501 S. Chester St. Gastonia, N. C.
P. L. Piercy	128 Hudson St. Spartanburg, S. C.
J. R. Richie	3014 Lewis Farm Road, Raleigh, N. C.
J. W. Brown	P. O. Box No. 560, LaGrange, Ga.
J. K. Davis	P. O. Box No. 129, Auburn, Ala.
C. E. Herrick	44 Franklin St., Providence, R. I.
Hugh Williams & Co.	47 Colborne St., Toronto 1 ,Canada

Is Space an Important Factor?

Then Use This Distinguished Line of Close-Coupled Pumps

These GMC Pumps are ideal for a multitude of jobs. Smooth and efficient whether vertical, horizontal, up-side-down or any inclination. Low first cost, low power and maintenance costs. Top quality "by Aurora."
Caps. 10 to 800 G.P.M.
Heads to 250 Ft.
PUMPS "by Aurora"
Type GMC Aurora Close-Coupled Pump
Write TODAY for CONDENSED CATALOG "M"
also BULLETIN 120
DISTRIBUTORS IN PRINCIPAL CITIES

AURORA Always PUMPS
AURORA PUMP COMPANY
90 Loucks Street, Aurora, Illinois

"THE ROVING FRAME"

by Fay H. Martin

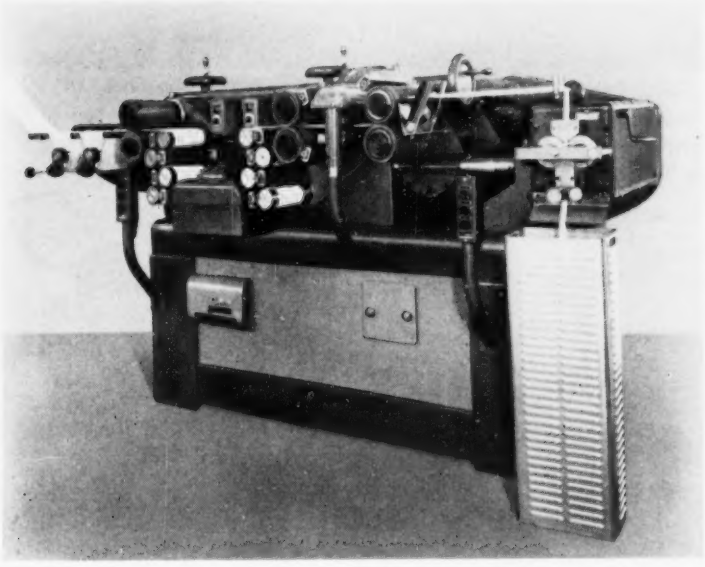
Every carder, frame fixer, section man, and superintendent will find "The Roving Frame," by Fay H. Martin, an instructive pamphlet. Mr. Martin, who has long written articles for "Textile Industries" clearly interprets draft, twist, lay, tension, pressure of the presser, hyperbola curve, the winding of the bobbin, reverse twist on the roving frame, roving frame cones, tensions and compounds so that the student or practical man will profit by his explanation. This is a reprint of 26 pages 8½ x 11 of a series of articles which were previously published in "Textile Industries," containing valuable information, illustrations, tables, charts and diagrams.

Fay H. Martin was a recognized authority on the roving frame. This book has been adopted by textile schools and vocational schools. May be secured in conjunction with a 3-year subscription to "Textile Industries" for $5.00 (Foreign, $11.00).

TEXTILE INDUSTRIES

806 Peachtree St., N.E. Atlanta 5, Georgia

NEW Equipment AND MATERIALS



Turbo tow stapler. See diagram below for method of operation.

Staple from Tow by the Perlok System

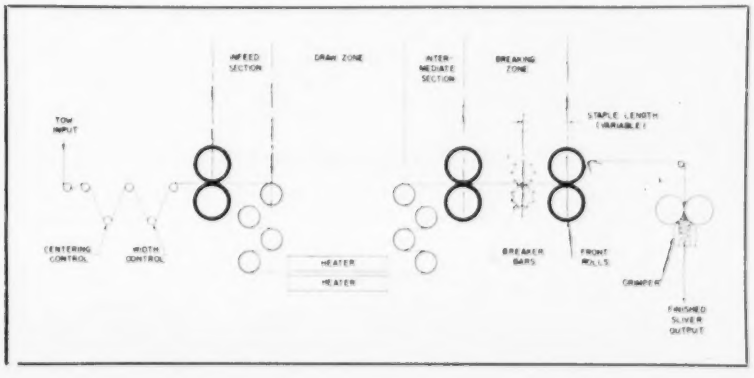
The Turbo Tow Stapler is designed to maintain optimum fiber parallelism while reducing continuous fibers to fibers of controlled staple length. At the same time, the machine is able to offer to a mill extreme flexibility with a minimum of operations from tow to yarn.

While designed throughout for maximum strength of all parts, the machine is easily given maintenance and is readily changeable from one fiber to another or from one length to another.

The sliver produced has very good uniformity and fiber dispersion, and it is possible to produce even yarns with but one open-drawing operation with ten doublings, one pin-drafting operation with three doublings, roving, and double-creel spinning.

Process features: The stapler produces staple fibers from tow by the Perlok System. The continuous filaments are pretensioned to remove all crimp and to insure an even feed to the breaking zone. A draft of between 2 and 8 in the breaking zone subjects each fiber to a strain. At

Schematic diagram showing flow of tow through Turbo stapler.



Orr SLASHER Cloth

With Special Chemical Treatment

Something New and Better

● Slasher Cloth is an important maintenance item in a cotton mill. With the introduction of ORR Slasher Cloth with Special Chemical Treatment, many of the problems which have pestered the slasher room foreman have been eliminated.

The slasher room foreman, in order to satisfy the superintendent and the cost department, must have available a Slasher Cloth that:

1. Dresses the yarn properly.
2. Holds its width. No shrinkage.
3. Maintains level production performance.
4. Starts fast — lasts long.

ORR Special Treated Slasher Cloth maintains uniform dressing properties, resists bacteria and steam degradation, maintains dimensional stability. Discuss your Slasher Cloth problem with your ORR representative.

Distributed by

J. S. FALLOW & CO.
279 Union St., New Bedford, Mass.

OLIVER D. LANDIS
718 Queens Rd., Charlotte 7, N. C.
Telephones: 3-0958—3-4557

P. W. COLEMAN
Box 1393, Greenville, S. C.

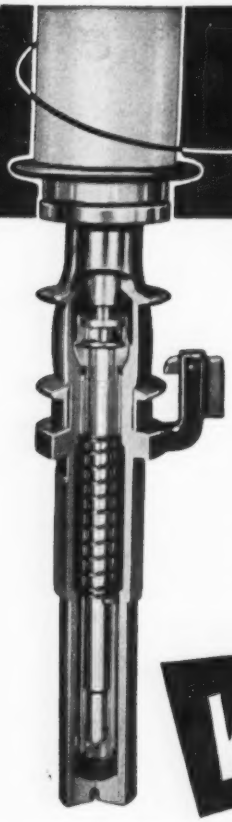
MANUFACTURED BY

THE ORR FELT & BLANKET CO.

PIQUA, OHIO, U. S. A.

Industrial Woolens by Orr

STARTS FAST — LASTS LONGER

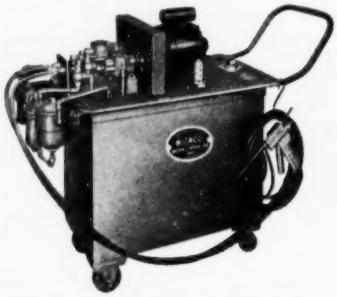


WICACO ROLLER BEARING SPINDLES

first in Quality since 1868

WICACO Roller Bearing Spindles, incorporating the SKF roller bearing type of bolster, are the finest spindles your money can buy, developed to perfection through the many years since Wicaco first introduced Roller Bearing Spindles to the Textile Industry.

Many textile mills have found that Wicaco Roller Bearing Spindles cost no more than ordinary ones, and reduce operating costs. We will design them to meet your particular requirements. Write today for quotations without obligation.



WICACO SPINDLE OILING MACHINE

The WICACO SPINDLE OILING MACHINE guarantees proper lubrication for all twisting spindles, flushes out the old oil and replaces it with fresh clean oil in one simple operation. Saves time, labor, power. Order yours today, or send for descriptive folder NOW.

WICACO

WICACO MACHINE CORPORATION

Designers and Manufacturers of Precision Machinery and Parts

WAYNE JUNCTION — PHILADELPHIA 44, PA.

AMERICAN SUPPLY CO.
1420 Broad St.
Central Falls, R. I.

RALPH GOSSETT & CO.
Suite 204, Crawford Bldg.
Greenville, S. C.
and P. O. Box 6052
Charlotte, N. C.

OTHER AGENTS in FOREIGN COUNTRIES

Mr.

Master Mechanic

Do You Have
TROUBLE
CLEANING
PRESS ROLLERS

A New MOMAR
Product and
Method Does It
QUICKLY
ECONOMICALLY

WRITE FOR FREE DEMONSTRATION

MOMAR INCORPORATED
MANUFACTURING CHEMISTS
451 WHITEHALL ST. ATLANTA, GA.

FREE TRIAL

Davis Card Scavenger Roll Covers®

Strip Clean Instantly
Fit Any Sized Roll
Hug "Beat-Up" Rolls Tightly
No Seams—No Frayed Ends
Outlast Paper or Cloth Covers—3 times

Free Trial: Send us an old scavenger roll to be recovered. We will return it to you prepaid and let you be the judge.

We also make: Knit Dye Tubing; Sheepskin and Cloth Clearers; Star Brand ★ Roller Varnish.

THE TEXTILE LABORATORIES

P. O. Box 1003 Telephone 5-2791 Gastonia, N. C.

Knitting and Warp Yarns

Cotton
4's to 30's

Viscose Rayon and Blends with
Orlon, Vicara and Dynel
18's to 30's, single and ply

COMER-AVONDALE MILLS, INC.

Boston — Chattanooga — Chicago — Charlotte — New York
Philadelphia — Reading

representing

AVONDALE MILLS
Sylacauga, Alabama

COWIKEE MILLS
Eufaula, Alabama

NEW Equipment AND MATERIALS

the same time the fibers are thrown out of their normal path by abrasive edges and are thereby broken into staple lengths. By this method all adjacent fibers do not necessarily break at the same point nor to the exact same length. For this reason the uniformity of the sliver as it leaves the front roller is good and the fiber distribution very even. After leaving the front rollers the fibers enter the crimper and from there drop into a conventional roving can in the form of sliver.

Turbo Machine Co., Lansdale, Pa.

For additional data, request item C-121, using Handy Return Card on page 200.

Warper Beams for Rayon and Other Synthetics

A warper beam recently introduced for high tenacity rayon tire cord, filament rayon, nylon, etc., features construction improvements as follows:

Internal supports—six aluminum castings serve as internal supports for construction of barrel, providing savings in weight and greater dimensional accuracy due to the possibility of holding closer tolerances.

Barrel staves—Northern pine is customarily used unless compression or crushing force is excessive, in which case hard maple is utilized.

Beam heads—Four plies of properly dried rock maple cross-laminated at 90-degree angles is construction used. It equalizes stresses and strains. Beam head is lighter in weight, accurately turned on center to provide high degree of dynamic balance for either high or slow speed operation, and is virtually unbreakable.

Protective tires—Hard, specially-treated steel tire approximating .094" thickness is applied in way which entirely eliminates slippage.

Outside reinforcing plates—20" dished steel reinforcing end plate secured to each end of the beam with tie rods and nuts is constructed of ¼" alloy sheet steel with feathered edge. Plates enable beam heads to withstand tremendous pressure simply by varying torque on tie rod nuts; also larger diameter heads can be used so that larger package can be built.

Examining a finished warper beam at the U. S. Bobbin & Shuttle Co. plant are J. E. Oliver (left), salesman, and R. F. Dutton, vice-president in charge of manufacturing.

U S Bobbin & Shuttle Co., Warper Beams and Beam Heads Div., Lawrence, Mass.

For additional data, request item C-123, using Handy Return Card on page 200.

High Temperature Stock Dye Kettle for Synthetics

The Hy-Temperature Stock Dye Kettle was developed for dyeing synthetic fibers at temperatures up to and including 250 F. At these elevated temperatures it has been found that dyeing of the "hydrophobic" synthetics becomes simple and easy, the dyeing cycle is greatly reduced, penetration and levelness are much enhanced, and dye exhaustion is virtually complete.

Stainless steel (Type 316) is used throughout, and the kettle is insulated. Instrument panel with pressure gauges and thermometer is provided. The cover, which is of the hinged type, is counterbalanced and opened and closed by air.

Liquor is circulated through the stock from the top of the cheese to the bottom and the flow is not reversible. All heating is done by a heat exchanger, resulting in a constant, uniform volume of dye liquor from start to finish with no build-up due to condensate. It can also be

"Horse and Buggy" Methods

New Developments

The methods of today will be the "horse and buggy" methods of tomorrow! Many changes have taken place in the last few years and more are doubtless on the way. There was never a time when it was so important for textile men to take advantage of all the aid they can get.

Use T. I.'s Help

You can get the aid you need through TEXTILE INDUSTRIES. Month after month T. I. brings you practical and interesting articles on mill problems and solutions; constructive experiences and suggestions of men in the various branches of the industry whose problems are the same as your own.

Read each issue caréfully and have others in your organization read it. T. I. will keep you abreast of the rapid changes which are taking place in our field.

The time each month you spend reading TEXTILE INDUSTRIES will be a most profitable investment for you. Keep your subscription in force at all times. Three years for only $4.00.

Textile Industries

806 Peachtree Street, N.E.
Atlanta 5, Georgia

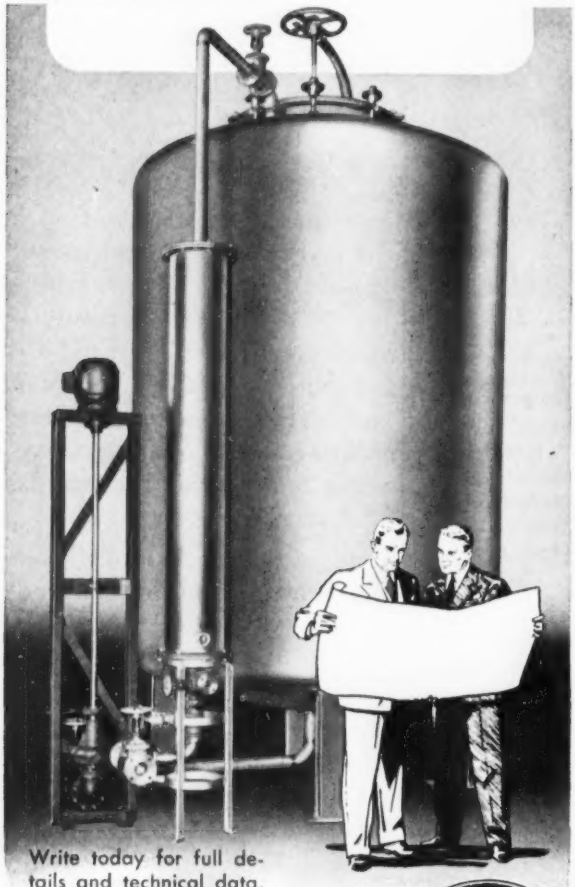
ALLEN KIERS

Engineered...

TO YOUR SPECIFICATIONS

Famous Allen Worcester complete stainless pump and heater kiers are the answer to your short run and heavy goods problems where quality control is important. Full liquor strength maintained . . . no live steam admitted . . . positive circulation. For raw stock, knit goods, heavy goods for vat dyeing, thread and yarn, toweling, curtain goods, varying lots, *you must have kiers — Allen Kiers.*

Allen Worcester also installs modern circulation systems on old kiers.

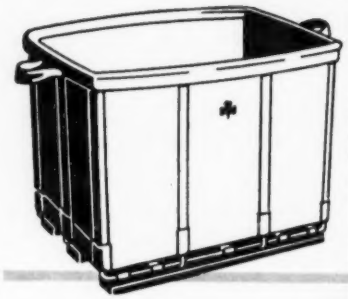


Write today for full details and technical data.

WILLIAM ALLEN SON'S COMPANY
WORCESTER 1, MASS.

ALLEN WORCESTER

Makers of the famous ALLEN KIERS



BUILT FOR YEARS OF RUGGED SERVICE

SHAMROCK

CANVAS BASKETS, HAMPERS, TRUCKS
Many styles and sizes. Also special sizes and shapes to meet your need.

SALES OFFICES:
NEW YORK—F. R. Tyrolar, 37 W. 43rd St., MU 2-1437. ATLANTA—W. E. Petway, 4403 Jefferson St., Chamblee, Ga., Phone 7-2430. FORT WORTH—V. M. Hooton, 717 Ayers St., Lockwood 6564. SAN FRANCISCO—c/o Glenn B. White & Assoc. Merch. Mart, HE 1-5204. LOS ANGELES—c/o Glenn B. White & Assoc., 1151 So. Broadway, PR 4169.

MEESE, INC.
Main Office & Plant
MADISON, INDIANA
Phone 261 or 262

Weave Mills That Require

PAPER FILLING

Rely on

LAZENBY WINDERS

For hard or soft twist, crushed or paper ribbon, we can supply Cop and Bobbin Winders to produce maximum yardage.

Send us a small supply of your paper and we will wind and return with Report and Catalog.

F. A. LAZENBY & COMPANY
3106 Elm Avenue — Baltimore, Md.

BARNES SERVICE

Consulting Engineers

TO THE TEXTILE INDUSTRY FOR OVER ½ CENTURY

Surveys–Reorganizations–New Plant Developments for Cotton, Wool, and Synthetic Yarn and Cloth Processing, Bleaching, Dyeing, Printing and Finishing.

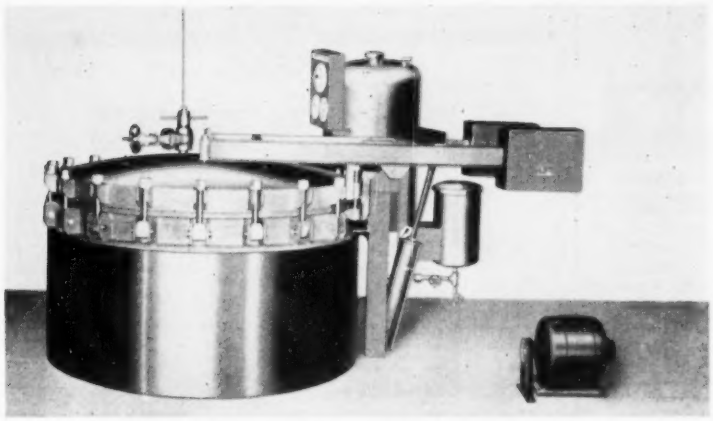
★ Plant Appraisals ★ Mechanical and Operating Surveys — New Methods ★ Scheduling and Planning ★ Work Load Studies, Job Analysis and Evaluation, with Incentive Plans ★ Standard Cost Installations ★ Cost Control Methods.

Labormeter Burden-meter Waste-meter

Member: Association of Consulting Management Engineers, Inc.

SERVING THE TEXTILE INDUSTRY OF THE WORLD — CENTURY

BARNES TEXTILE ASSOCIATES, Inc.
10 HIGH STREET, BOSTON 10, MASS.
522 FIFTH AVE., NEW YORK 18, N. Y.
920-923 MONTGOMERY BLDG., SPARTANBURG, S. C.
European Agent, Ralph L. Hodara, 101 Reaumur, Paris 2



Riggs & Lombard Hy-Temperature stock dye kettle.

used to cool down the liquor to a temperature below atmospheric boil, at the end of operations.

A standard part of the equipment is a boil-up tank of 35 gallons capacity equipped with steam pipe and dart nozzle as well as ejector for feeding the original charge of dyestuff and/or acid into the pressurized expansion chamber of large capacity. It is felt that pressurized expansion chamber is a very worthwhile addition to the machine since it provides plenty of room for dye adds or feed on and also allows nearly 100% of the dye to be exhausted from the dye bath.

A small "shading" tank allows small quantities of dyestuff to be added without losing temperature or pressure in order to bring the stock to the exact shade desired. The main tank is also fitted with a sampling device which allows a sample to be taken quickly and easily at any time without loss of either temperature or pressure.

The kettle is being made in standard capacities from 50 to 1000 lb; it can readily be made into a combination type for handling both raw stock and top either on jack spools or standard ball top form.

Riggs & Lombard, Foot of Suffolk St., Lowell, Mass.

For additional data, request item C-119, using Handy Return Card on page 200.

Lubricant Prevents Bruises, Crow's Feet in Dyeing Heavy Rayons, Acetates

Atolene RW, originally marketed as a wetting and dye-leveling agent, has been found to be an effective lubricant in the prevention of bruises, crow's feet, and similar harmful effects in the scouring and dyeing of heavy rayons and acetates.

The lubrication characteristic of Atolene RW, a sulfated ester of oleic acid, is due to the fact that it is almost completely sulfated. The high degree of sulfation in Atolene RW apparently is responsible for an absorption of the sulfated ester by the fibers on their surface during dyeing and scouring. This layer of fatty molecules acts as a lubricating film during wet processing.

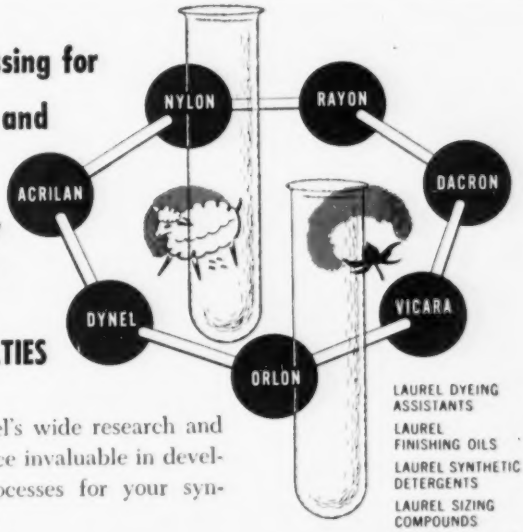
Dexter Chemical Corp., Textile Chemical Div., 819 Edgewater Rd., New York 59, N. Y. (C-601).

Two Surfactants Aid Scouring of Cotton, Rayon, and Raw Wool

Two new surface active agents, designated Triton X-102 and Triton X-138, are highly concentrated nonionic surfactants based on a synthetic hydrophobe and ethylene oxide.

Triton X-102 meets the need for a detergent having excellent emulsification properties for the waxes and oils which must be removed from rayon and cotton fabrics and yarns before they can be satisfactorily bleached and dyed. In addition, the product offers improved solubility under the conditions of alkalinity and high temperature which are en-

Smoother processing for your synthetics and blends with Laurel TEXTILE SPECIALTIES



LAUREL DYEING ASSISTANTS
LAUREL FINISHING OILS
LAUREL SYNTHETIC DETERGENTS
LAUREL SIZING COMPOUNDS
LAUREL ANTISTATIC COMPOUNDS

You will find Laurel's wide research and processing experience invaluable in developing practical processes for your synthetics and blends.

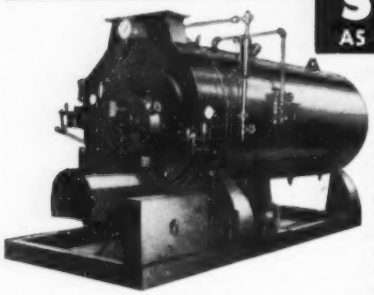
For nearly forty-five years, leading processors have looked to Laurel for help in eliminating processing "headaches." Why not try us? Write, wire or call.

textile soaps, oils, finishes
LAUREL SOAP MANUFACTURING CO., Inc.
Wm. H. Bertolet's Sons
ESTABLISHED 1909

LAUREL SOAP MANUFACTURING CO., Inc.
2603 E. TIOGA STREET, PHILA. 34, PENNA.

Representatives in Atlanta, Ga., Charlotte, N.C., Paterson, N.J., Providence, R.I.

REGARDLESS OF SIZE
CYCLOTHERM
GIVES YOU . . .
STEAM
AS YOU NEED IT



with CYCLONIC COMBUSTION!

If your steam requirements have a tendency to change at different times of the day, the most economical and efficient boiler you can install is a Cyclotherm Steam Generator.

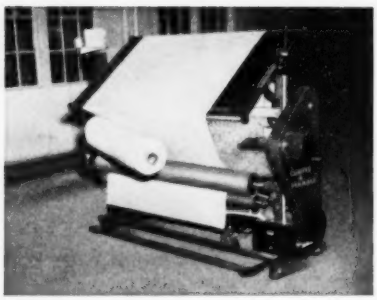
Cyclotherm means *Quick Steam* when called for. This reduces fuel consumption during "coming up" periods and permits continuous, quick adjustment to load changes. The Cyclotherm Boiler is able to deliver steam faster because of its extremely high heat transfer and the fact that it has much greater water circulation since the combustion chamber is radiating heat evenly along its entire length.

REMEMBER—Full power operation from a cold start in 15 to 20 minutes. Guaranteed 80% efficiency. Savings up to 50% on maintenance. Great fuel operational savings. Boilers are designed for oil or gas operations from 18 thru 500 h.p., 15 to 200 lbs. operating pressure.

Write today for latest descriptive folder, "All Your Questions Are Answered by Cyclotherm."

CYCLOTHERM STEAM GENERATORS
DIVISION UNITED STATES RADIATOR CORP.
DEPARTMENT 37, OSWEGO, NEW YORK

TEXTILE MACHINERY



S-2A Unispeed Inspector for Rayons

- Constant cloth speed (adjustable) with center wind.
- Collapsible winding arbor, self-supporting for convenience in removing inspected roll of rayon.
- The machines shown in the "General View of the Inspection Department" of the Hathaway Manufacturing Co. on page 13 of the May, 1952, issue of *Textile Age* are the same machines as the one illustrated above.

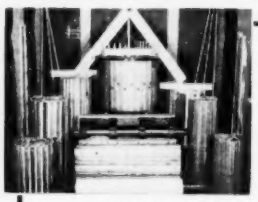
Send for Bulletin No. 345

Curtis & Marble
MACHINE COMPANY
WORCESTER, MASSACHUSETTS.

MODERN Custom Cut
FERGUSON GEARS

FOR OVER 25 YEARS
A WATCHWORD IN
SERVICE AND
QUALITY

FERGUSON
GEAR COMPANY
GASTONIA, NORTH CAROLINA
Phone 4-2626



PROMPT
SERVICE on

- BEATER LAGS for all makes, fitted to order
- COMPLETE BEATERS—Kirschner and Plate
- ALL TYPE APRONS, both new and reworked, including fireproof aprons

TODD-LONG PICKER APRON CO.
Gastonia, N. C. Plant 5-4021 Night 5-5149

FRANK G.
NORTH
INCORPORATED
MANUFACTURING CHEMISTS
Atlanta, Ga. • P. O. Box 123, Sta. A • Phone RAymond 2196
Marietta, Ga. • P. O. Box 92 • Phone Marietta 9-4323

The Nation's largest manufacturer of Sizing Compounds, Gums, Waxes and other kindred products for all warp yarns.

countered in these operations.

Triton X-138 offers a solution to the problem of obtaining efficient scouring of raw wool, without damaging the finest fibers. It is applicable to wool, cashmere, alpaca, vicuna, and mohair. This product readily emulsifies the wool grease, and is effective under less alkaline conditions than previously used materials. It rinses out readily, even at low temperatures, and is not adversely affected by hard water. It is not substantive to wool, and therefore does not leave residues on the wool fiber. This property results in high efficiency in the wool carding operation.

Rohm & Haas Co., Washington Square, Philadelphia 5, Pa.

For additional data, request item C-122, using Handy Return Card on page 200.

Knit Goods Washer Needs Little Attention

A new type slack washer for knit goods, known as "Con-o-matic," offers many advantages.

Self-compensating rollers keep an even amount of fabric in each tank, without any effort or even any attention on the part of the operator. Through the use of tapered squeeze rolls tanks are kept filled with fabric to the desired level, thus insuring tension-free operation.

Keeping the tanks supplied automatically and eliminating the possibility of tension reduces to a large extent the attention that must be given by the operator.

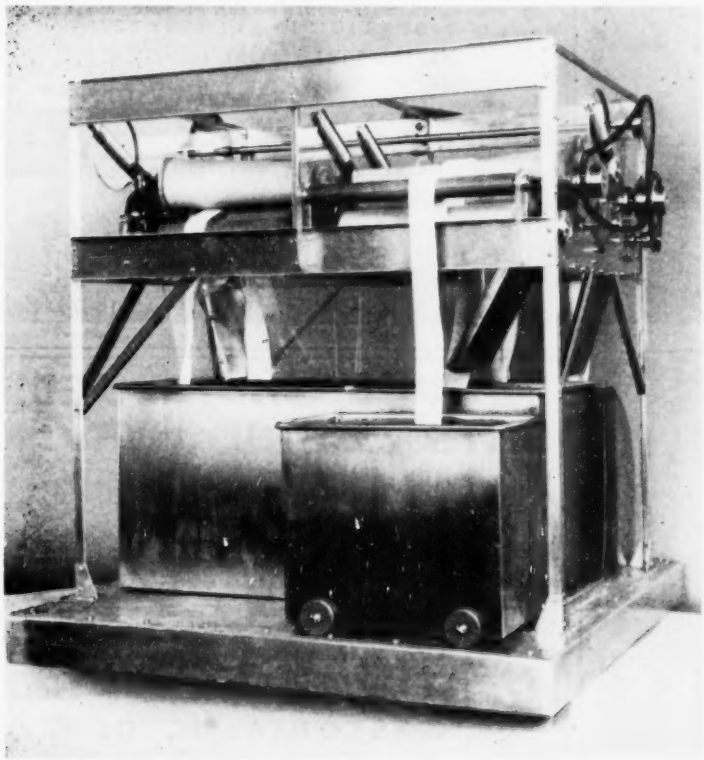
Considerably less maintenance is required; also less floor space.

The machine is also adaptable for use as a saturator, or in a dye process. For that matter, it can be utilized wherever fabrics are to be processed in liquid.

Proctor & Schwartz, Inc., 610 Tabor Rd., Philadelphia 20, Pa.

For additional data, request item C-801, using Handy Return Card on page 200.

Model of "Con-o-matic" knit goods washer (Proctor & Schwartz).



NO OILING IN THIS MILL

One 600,000-spindle mill has been using Whitehead Permalube Saddles and Nebs for two years on *hardened-steel* rolls. Ends down have been reduced from 30 to 15. Frames are cleaned only once in several weeks, instead of twice daily. And oiling costs have been completely eliminated. Whitehead Permalube Saddles and Nebs can do the same for you. Write for complete information.

Coleman Co., Box 3597, Greenville, S. C.
Roy Schrimshire, Box 906, Columbus, Ga.
Matthews Equip. Co., 93A Brdwy., Prov., R. I.
Don O'Hair, Box 8254, Charlotte 8, N. C.

WHITEHEAD ENGINEERING CO.
522 WEST PEACHTREE STREET, N.W.
ATLANTA 3, GEORGIA

Best
★ FOR PERFORMANCE
★ FOR LONG LIFE
★ FOR HIGH SPEEDS
★ FOR PRICE

Vermont
SPOOLS AND BOBBINS
SINCE 1906
234 S. CHAMPLAIN ST.
BURLINGTON, VT.

"THERE IS HARDLY ANYTHING IN THE WORLD THAT SOME MAN CANNOT MAKE A LITTLE WORSE AND SELL A LITTLE CHEAPER, AND THE PEOPLE WHO CONSIDER PRICE ONLY ARE THIS MAN'S LAWFUL PREY." (John Ruskin)

There has never been a truer statement

AMERICAN, HICKS, WILSON, WENTWORTH DOUBLE DUTY, GRAVITY

Registered Trade Marks

ETARTNEP FINISH—New Chemical Process

Ring Travelers for Every Spinning and Twisting Purpose

NATIONAL RING TRAVELER CO.

PAWTUCKET, RHODE ISLAND — Philip C. Wentworth, Treas.

CHARLOTTE, NORTH CAROLINA — L. Everett Taylor, Southern Manager

NATIONAL RING TRAVELER CO. PAWT. R.I. U.S.A.

PENICK & FORD, LTD., INCORPORATED

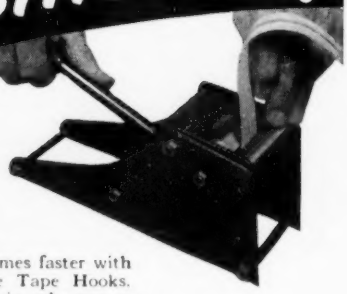
CORN STARCHES, DEXTRINES, GUMS, CORN SUGARS & SYRUPS

NEW YORK, N. Y. - - - - CEDAR RAPIDS, IOWA

SOUTHERN OFFICES: ATLANTA, GA. - - - - SPARTANBURG, S. C.

John:
Why not let the Penick & Ford Textile Laboratory in Atlanta check specifications on that cloth?
Jim

10 TIMES FASTER THAN STITCHING!

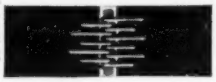


SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT

Fletcher

SINCE 1850 • PIONEERS IN
TEXTILE EXTRACTORS
NARROW FABRIC LOOMS
THROWING MACHINERY

FLETCHER WORKS

2225 GLENWOOD AVE. PHILADELPHIA 40, PA.

PEGGED *and* GLUED!
BRISTLES *Stay Put*

LONGER LIFE—Spiral card brushes, refilled the Gastonia way, last from 10 to 15 years, compared with 2 or 3 years when staples are used—for STAPLES WILL NOT STAY PUT IN SOFT WOOD. Gastonia first dips the bristles and fiber in glue, then they are permanently pegged in.

BETTER FINISH—To prevent lint from collecting on rolls, Gastonia paints them with high-grade bobbin enamel, which dries to a hard, glossy finish.

Brushes can be refilled and returned in two days. Freight is paid one way.

JOHN T. HARRELL, MGR. PHONE 5-2422

GASTONIA BRUSH Co.

GASTONIA, N. C.

NEW Equipment AND MATERIALS

Hydraulic Lift Truck for Handling Warp Beams

Warp beams up to 28 inches in diameter and up to 90 inches in length can be easily handled on the Standard Hydraulic Lift Truck, Model GA.

Beams on the truck are hydraulically lifted to a height of 27 inches, permitting them to be transported down narrow aisles at a level above the whip rolls of the looms on each side of the aisle. The cradle supporting the beam swivels on its base, permitting the beam to be gradually lowered hydraulically into the beam locks on the loom with the truck at any desired angle to the loom, eliminating practically all lifting on the part of the operator, thereby preventing accidents caused by overlifting.

Trucks are made in four sizes. A special locking device is provided for two casters on each truck. When it is released, the truck can be easily pushed to another location.

Two views of Standard hydraulic lift truck for warp beams. Upper photo, platform down; lower, platform raised.

Standard Mill Supply Co., P. O. Box 1534, Providence, R. I.

For additional data, request item C-118, using Handy Return Card on page 200.

DUNKING STATIONS!

During the past 7 years, hundreds of plants have discovered that SIPCO "Dunking Stations" are the "all time" solution to their plant smoking problem.

Built for hard industrial use—and abuse! Cigarets, cigars, matches extinguished immediately—no smoldering—no fire hazard.

Unit No. 1—Heavy cast aluminum canister, attractive metal sign, upright and heavy weighted base for use on floors, aisles, etc.

Unit No. 2 (Illustrated)—Same as Unit No. 1, except without upright and base. Easily mounted on walls, columns and posts.

Unit No. 3—Canister alone, with mounting bracket.

Send TODAY for new illustrated folder which gives complete details.

STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. E
116 So. Garfield Ave. Peoria, Illinois

Want More Information on These Items?

Write key number (C-401, etc.) in appropriate space on Handy Return Card on page 200, and drop card in mail.

Positive displacement type pump designated the Dudley V-9 for water, brine, oil, chemicals, etc., has only 12 moving parts, with no connecting rods, cams or springs, and does not require lubrication.

Eastman Pacific Co. (C-321).

A set of 18 graded files, each of them a different thickness ranging from .009" to .072", is handy for precision slot filing, gap filing of electrical contacts, filing in inaccessible spots.

Tacony File & Hardware Co. (C-322).

Carton stapling machine for closing all types of corrugated and fiber cartons after they are filled is called the "International Boxer." Just place it on carton and press operating lever.

International Staple & Machine Co. (C-323).

Dry-lubricant finishes that are tough, adherent, and load-bearing may now be applied to any machine or instrument surface, using ordinary brush or spray techniques and without special equipment, by means of new types of molybdenum-base lubricating-enamels designated "Molynamel" now available on experimental basis.

The Lockrey Co., Lubricants Division (C-324).

Clean compressed air of "instrustrument quality" is provided by dehydrating and filtering ordinary plant air in the new Model B-30-D Condensifilter which has a disposable filter cartridge, making unit operation economical.

Hankison Corp. (C-325).

A synthetic resin, Piccopale, for use in sizing and in mildew- and damp-proofing compounds, is clean, clear, transparent thermoplastic, having good chemical resistance, ready solubility, and compatibility with a wide range of products. Available as solid, flaked, and in solution.

Pennsylvania Industrial Chemical Corp. (C-328).

NEW TEXTILE COURSES

Home-Study Courses Train You for Bigger Jobs, Higher Pay, Help Your Mill Beat Competition by Improved Production

Training is more than ever necessary to climb to higher positions. To equip you for better performance, broader responsibility, I.C.S. offers courses covering major phases of the textile field.

Textile Manufacturing—Textile Engineering—Finishing and Dyeing—Designing—Merchandising—Textile Mill Supervisor—Loom Fixing—and many other courses covering technical training in cotton, rayon and woolen mills.

Courses can be arranged to fit needs of specific individuals or employee groups. Business Administration — Accounting — Machine Shop Practice — Electrical Maintenance—Industrial Chemistry—Business Correspondence — to mention just a few.

All courses job-related, helpful whether you earn $20,000 or $2,000. Send for free information, also free book "How to Succeed." Just mail the coupon below.

International Correspondence Schools
Dept. 2419, Scranton 9, Pa.
Please send information on.....
Course and free book "How to Succeed."
Also employee training plan ( )

Name

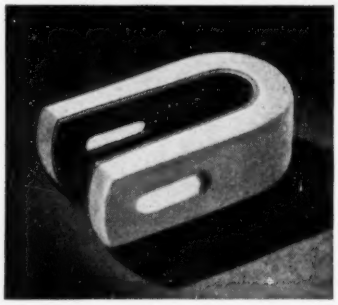
Address

City State

Occupation Age

PICK ARM LUG STRAP — Another Fine Rice Dobby Product

HARRIS "Heavy Duty" Lug Strap
Leather and Fibre Adjusting Strap
Special Braided Loom Cord
"Wirecore" Loom Cord
Improved Dobby Bars
Dobby Pegs



You Always Receive Service and Quality from

RICE DOBBY CHAIN CO.

Millbury, Massachusetts

Southern Representatives: R. E. L. HOLT, JR. ASSOCIATES, INC., Jefferson Building, Greensboro, North Carolina

Industrial Engineers

SPECIALIZING IN TEXTILES FOR OVER ONE-THIRD OF A CENTURY

PAYROLL CONTROLS COST SYSTEMS
SPECIAL REPORTS WORK LOAD STUDIES
COST REDUCTION REPORTS

Ralph E. Loper Co.

GREENVILLE, S. C. FALL RIVER, MASS.

SAVE UP TO $800 YEARLY *with the right* **SHUTTLE FUR**

- *FREE BULLETIN SHOWS HOW to SAVE on SHUTTLE FUR*
  For the best weaving results—give us a trial on your shuttle fur requirements
- *FREE SAMPLES OF SHUTTLE FUR*
  In any width or grade. Also whole hides from Australian, Brown and Gray Opossum
  WRITE TODAY FOR PRICES AND SAMPLES

MORRIS FUR COMPANY
P. O. BOX 816 • *Phone: 6-5934* • BURLINGTON, N. C.

Kali **SPECIALIZED TEXTILE CHEMICALS**
MEET SPECIFIC NEEDS OF PROCESSING

Much of the manufacturing capacity of the extensive Kali plant is devoted to the production of specialized chemicals, formulas for which have been worked out by Kali laboratory technicians to meet the problems of textile mills. Among these efficient chemicals are:

- **NYLON SIZE—NYLON CONING OILS.**
- **KALPINOL used in troughs for knitting NYLON.**
- **HYDROXY* SIZES for Acetate, Viscose, Bemberg. Filament Yarns. Also for cut staple and mixtures.**
- **RAYSPINOLS for oiling cut staple stock. Cuts down waste and makes good spinning.**
- **HYDROXCENE for Rayon Crepe Yarns.**
- **WETTING and FINISHING AGENTS for Rayon, Nylon, Cotton, Silk. Cut Staples and Mercerized Cotton.**
- **PURE SILK THROWING OILS.**
- **WATERSHIELD Water Repellents.**
- **AQUAKAL 77 a synthetic amine detergent.**
- **AQUAKAL 74 a rapid penetrant and leveling agent.**
- **KALEPON-W a protective colloid used in dyeing, bleaching, and stripping of wool.**

*(*Reg. U. S. Pat. Off.)*

KALI MANUFACTURING COMPANY
Manufacturing Chemists
427 Moyer Street Philadelphia 25, Pa.

LOWER SPINNING TAPE COSTS with

TIGER-TUF *Spinning Tape*

LOOK FOR THE THREE YELLOW STRIPES

- **Assures Top Spindle Speed**
- **Lower Tape Cost Per Spindle**
- **Very Low Stretch Factor**
- **Double Herringbone Weave**

Compare Tiger-Tuf with any other tape. Compare quality —compare costs. You'll want to equip all of your frames with dependable TIGER-TUF. Write today for details.

Immediate Delivery in the following widths:
1/2" 9/16" 5/8" 11/16" 3/4" 13/16"

COLEMAN CO., Inc.
POST OFFICE BOX 1351
GREENVILLE, SOUTH CAROLINA

Ga.-Ala. Rep.: Roy Schrimshire, Box 906, Columbus, Ga.

NEW Equipment AND MATERIALS

Tandem Napper Features Precise Control

A tandem double acting napper is now being manufactured. Two napping units are operated as one machine with double the napping production, and with improved napping quality.

Energy indicators give the operator precise control over the napping. This control, made possible by the positive drives of the napping rolls, also extends to the positive drive which synchronizes the cloth feed between the two cylinders, permitting fine adjustment of the cloth tension.

The tandem napper can be arranged to deliver cloth to the rear, or to carry the cloth to the front of the machine for repeat runs.

David Gessner Co., Worcester, Mass.

For additional data, request item C-128, using Handy Return Card on page 200.

Softener for Synthetics Improves Cutting and Laying Up Properties

A new finish, Ampitol 35D, produces a soft, silky hand on acetate, viscose, nylon, and other synthetic fibers, improves the cutting and laying up properties, and helps to control static electricity. This substantive softener, cationic in nature, resists dry cleaning and washing when applied either in the dye beck as a final rinse or by pad.

Dexter Chemical Corp., Textile Chemical Div., 819 Edgewater Rd., New York 59, N. Y. (C-206).

Multi-Purpose Grease Cuts Costs and Bearing Failures

Exceptionally high resistance to breakdown is one of the basic characteristics of Shell Alvania Grease, a lithium base product for multi-purpose application.

Other properties of the grease are: its high water tolerance; broad temperature range, high pumpability (for automatic grease systems) and movement at low temperatures, and undergoing no phase change as temperature rises to the high melting point; low rate of oxidation and long induction period; and its excellent storage stability.

Savings made possible by combining these properties in one type of grease are: reduced grease consumption; elimination of misapplication; reduced inventory; more simplified purchasing and storage; reduced downtime, application cost, and maintenance; and substantially increased bearing life. Because it stays in bearings longer, relubrication periods can be substantially extended.

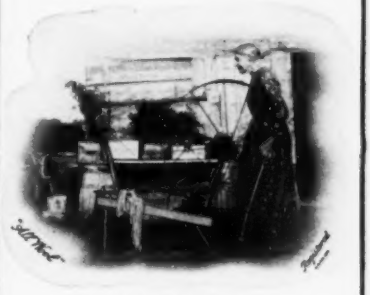
Shell Oil Company, 50 West 50th Street, New York 20, N. Y. (C-237).

New Books

An up-to-date description of the design, construction, and application of controllers to d-c and a-c type electric motors is contained in the third edition of Harwood's **Control of Electric Motors** published recently by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y. ($7.50). Arranged entirely by motor types, the book now includes material on automatic regulating systems and new data for calculating accelerating and decelerating time of a mechanical system. Operation and characteristics of d-c and a-c motors and the methods used to control them are described. Sections on pilot devices and accessories, wiring diagrams, and construction details are also given.

Plant Location, a 195-page study (including charts and maps) by Leonard Yassen of Fantus Factory Locating Service, is designed not only for executives who are relocating and adding plants, but for all business men to measure and constantly re-appraise the competitive advantages or disadvantages under which they operate. Why and how to make a study of raw materials sources, the manner in which they are processed, the people and skills needed to do that job, are given; also the buying habits and locational concentration of people who use the product. Against this picture, prospective locations are evaluated in terms of costs for materials, labor, utilities, taxes, and distribution to the market, the objective being the scientific determination of that one best community which offers the greatest competitive advantage for a specific manufacturing operation. How to find the minimum freight cost area, how to chart the center of the market, how to obtain a freight rate advantage to the market, are other items discussed. Publisher: Business Reports, Inc., 225 West 34th

EDWARD H. BEST & CO.
Est. 1888 Inc. 1901



KNOXALL
RACE PLATE FELT
PRESSURE ROLL FELT
SLASHER CLOTH
SLASHER JACKETS
SLASHER YARN

MASS., Boston — Office
222 Purchase St. HUbbard 2-4450
NEW YORK
H. W. CURTIS 735 W. Crescent Ave.
Allendale, New Jersey 1-3521
GEORGIA
W. C. HAMES 185 Pinecrest Ave.
Decatur, Ga. Dearborn 5974
SOUTH CAROLINA, Greenville
WILLIAM J. MOORE
P. O. Box 1970 Tel. 5-4820

Serving the Textile Industry for 28 Years

Supplying, repairing and servicing all types of electrical apparatus.

Locating hard-to-get electrical apparatus is our specialty.

Cleveland Electric Co.

557 Marietta Street, N.W.
ATLANTA, GA.
A friend to Industry since 1925

ALL STEEL
ECONOMY BALING PRESSES
ALL SIZES FOR ALL PURPOSES
LARGEST LINE BUILT IN U.S.A.

ECONOMY BALER CO., DEPT. C. ANN ARBOR, MICH., U. S. A.

REPRESENTATIVES:

43 Water St., New York 4, N. Y.

Drexel Bldg., Philadelphia, Pa.

Terrell Machine Co., 3000 South Blvd., Charlotte 1, N. C.

170 Summer St., Boston 10, Mass.

FIT BETTER—WEAR LONGER

Precision-Built Kentex Aprons made to any specifications, on short notice. Write for free samples and prices. We are world's largest manufacturers of genuine leather textile aprons.

TEXTILE APRON COMPANY
EAST POINT, GEORGIA

Hugh Williams & Company, Toronto Canada—Canadian Representative

For Nearly Half A Century

• • • • we have been printing Textile Industries and other W. R. C. Smith Publications in our growing plant which is today one of the South's largest, leading and most progressive printing organizations.

L. A. LEE Company, Inc.
DALTON, GEORGIA
Printers and Publishers

MILTON STEEL BARREL
WARP BEAMS

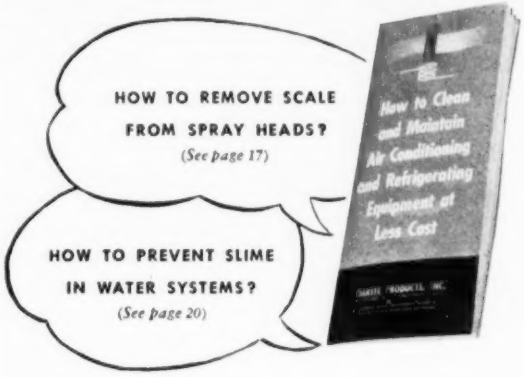
pictured is Milton Broadloom Beam for C & K Looms

for BROAD, NARROW FABRIC, RIBBON, VELVET & CARPET LOOMS

MILTON steel barrel Warp Beams are sturdily constructed with cast iron adjustable or fixed flanges. Ends equipped for all types of let-off.

WRITE FOR FREE BULLETINS
No. 45-B (Steel Beams) No. 49-A (Light Metal Beams)

MILTON MACHINE WORKS, INC.
MILTON • PENNA.


HOW TO REMOVE SCALE FROM SPRAY HEADS?
(See page 17)
HOW TO PREVENT SLIME IN WATER SYSTEMS?
(See page 20)
How to Clean and Maintain Air Conditioning and Refrigerating Equipment at Less Cost

THIS FREE HANDBOOK gives you the answers to these problems, tells you how to

- Descale condensers
- Remove slime from humidifiers
- Clean finned coils of air washers
- Clean aluminum plates and screens
- Clean glass filter screens
- Descale cold diffusers

FREE handbook yours on request. Ask your local Oakite Technical Service Representative, or write Oakite Products, Inc., 26C Rector St., New York 6, N. Y.

Technical Service Representatives in Principal Cities of U. S. & Canada

OAKITE
SPECIALIZED INDUSTRIAL CLEANING MATERIALS • METHODS • SERVICE

NEW Equipment AND MATERIALS

St., New York 1, N. Y. ($12.50).

An original study of the steady state characteristics of a new group of machines, Joseph M. Pestarini's **Metadyne Statics** contains an explanation of this electrical drive and control device, applications of which are expanding into textile technology and other fields. Theory, design, and application of metadynes are dealt with. Published by John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y. ($9.00).

Volume 3 of the **Review of Textile Progress**, published annually since 1950 by the Textile Institute and the Society of Dyers and Colourists, is now available from the Institute at 10 Blackfriars St., Manchester 3, England. Additions to the book include papers on the physics and chemistry of nylon, sizing and sizing materials, felt, and industrial applications of textiles. Both name and subject indexes are included.

A basic understanding of economic affairs is said to be obtainable in **How to Think About Economics** by Fred G. Clark and Richard Stanton Rimanoczy. Added meaning and interest in many daily events as they are reported in the press and over the air are benefits that should be derived from the understanding that can be gained from the book. D. Van Nostrand Co., Inc., 250 Fourth Ave., New York 3, N. Y. ($2.75).

A loose-leaf reference file on natural and synthetic fibers can be accumulated by subscribing to the "Natural and Synthetic Fibers Abstract Service" of Interscience Publishers, Inc., 250 Fifth Ave., New York 1, N. Y. (Subscription price for current volume—January 1 through December 31—is $60.00. Back volumes, starting with 1944, are $30.00 each.) Issued with the cooperation of Harris Research Laboratories and the Institute of Polymer Research, the abstracts are published monthly (about 1,000 pages per year) and cover the most important investigations and patents on the chemical and physical structure of fibers.

Conductimetric Analysis at Radio-Frequency by G. G. Blake describes the author's new technique and methods of conductimetric analysis or amperometric titration and also gives the details of setting up reliable apparatus for carrying out analyses and titrations. Applications discussed include chemical purity and control of chemical processes. Chemical Publishing Co., Inc., 212 Fifth Ave., New York 10, N. Y. ($2.75)

The possibilities, limitations, and social and economic consequences of the new machines of the electronic age that correct their own errors and carry on complex repetitive tasks with complete skill and precision are discussed in **Automation, the Advent of the Automatic Factory**, by John Diebold. In this book the author presents a picture of a new era and of the problem of readjustment and rethinking that will be necessary, including many actual case histories of office and factory, in education, management, and engineering. D. Van Nostrand Co., 250 Fifth Ave., New York 3, N. Y. ($3.00).

Detergents, What They Are and What They Do, by Donald Price, technical director of Oakite Products, Inc., gives the chemical nature of the various groups of surface-active agents and illuminates the mechanism of their action in removing water hardness and wetting hard-to-wet surfaces. It discusses among others the role of optical bleaches, builders, and extenders; also manufacturing processes and important applications of detergents. Chemical Publishing Co., Inc., 26 Court St., Brooklyn 2, N. Y. ($4.00)

The October, 1952, edition of the **ASTM Standards on Textile Materials** includes in their latest form 99 specifications, test methods, and tolerances developed by ASTM Committee D-13 on Textile Materials. Considerable other related material is given including technical papers entitled "An Application of Statistics to Quality Control in the Textile Industry" and "Statistical Considerations in Fiber Research." 660-page book with heavy paper cover available from American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. ($5.00).

The second volume of a two-volume American Chemical Society monograph written to replace the out-of-print "Soluble Silicates in Industry" is now available from Reinhold Publishing Corp., 330 West 42nd St., New York 36, N. Y. ($15.00). **Soluble Silicates, Volume 2**, by James G. Vail, contains a description of the film forming properties of silicates and their uses in all manner of industrial materials and techniques including adhesives, laminates, sizing, fire protection, cements, plastics, etc. The use of soluble silicates in the form of gels and their properties as catalysts, protective agents, and stabilizing materials is covered in detail.

for safe, efficient
STATIC
elimination

the Simco
MIDGET
is best of all—and least expensive!

the SIMCO company
9th and Master Streets
Philadelphia 22, Penna.

"You're headed right for a Restful Night"

DINKLER HOTELS in the South

in Atlanta
the DINKLER-ANSLEY

in Birmingham
the DINKLER-TUTWILER

in Montgomery
the DINKLER-JEFFERSON DAVIS

in Nashville
the DINKLER-ANDREW JACKSON

In New Orleans
the ST. CHARLES

CARLING DINKLER, President
CARLING DINKLER, JR.,
Executive Vice President & Gen. Mgr.

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

CLASSIFIED RATES

Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches.

Transient rate for display classified, $8.00 per inch.

Contract rate for space within 12 months period as follows:

	Per Inch		Per Inch
12 inches	$7.50	48 inches	$6.75
24 inches	7.25	96 inches	6.50
36 inches	7.00	180 inches	6.00

POSITION WANTED: 10c per word per insertion; minimum charge $2.00. Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

POSITIONS OPEN—MEN WANTED: Manager also boss carder synthetic yarns; cotton cloth and yarn mill supts.; expert on braiders and jacquard looms; supt. narrow fabrics (non-elastic fabrics); knit. mill mgrs., supts., overseers and fixers; designers; asst. supt. rayon weav. mill; overseer cot. weav. and slash. plain goods; overseers and second hands dyeing; overseers pile fabric dyeing, finishing and weaving, package dyer; cloth room overseer; second hands cot. spin.; chemists, chem. engineers and laboratory men for mills, also selling and demonstrating chemicals, sizings, etc.; tex. school graduates; master mechanics; slashing foreman; industrial engineers; nar. fab. loom fixer.

CHARLES P. RAYMOND SERVICE, INC.

294 Washington St. BOSTON 8, MASS. Telephone LI 2-6547

SPECIALISTS IN PLACING AND IN SUPPLYING TEXTILE MILL EXECUTIVES

WE BUY AND SELL

TEXTILE MACHINERY

THROUGHOUT THE WORLD!

GEORGE W. EGAN

"The Machinery Man Known Everywhere"

WOONSOCKET, R. I. — Phone Woon 3258

YOU CAN COUNT ON WAK COUNTERS

Single - Double - Triple

Rotary Counters • Slasher Counters • Hank Clocks

Pick Counters • Picker Counters • Yardage Counters

WAK INDUSTRIES Charlotte, N. C.

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.

91 Oliver St. Boston, Mass.

SINUS SUFFERERS

AMAZING NEW DISCOVERY — FREE TRIAL

THIS AMAZING NEW DISCOVERY gives quick relief from sinus headaches, pressure in forehead, soreness in eyes, aching cheek bones, bridge of nose, top of head, back of head and down neck, can't think straight or see well at times even tho' glasses have been recently fitted, nervousness, dizzyness. This new treatment relieves most sinus headaches in few minutes and as general rule soreness in head, face and neck is entirely relieved in short time. No matter how long you have suffered or how chronic your case may be or how many different treatments you have tried or how much money you have spent without results, we believe you will be amazed at the fast relief this amazing new treatment gives you. It has given amazing fast relief to thousands. Write for **FIVE DAY FREE TRIAL** post paid to you, no cost or obligation except this: when you write for it, it is agreed that you will mail it back at the end of five days if not satisfied, since it is not a sample.

NATIONAL LABORATORIES, — LODI, CALIFORNIA

EATON & BELL

Patent Attorneys

904 Johnston Bldg.
Charlotte, N. C.
1149 Munsey Bldg.
Washington, D. C.

TEXTILE ENGINEER

American textile engineer desires position with textile mill or machinery selling firm in South America. Several years experience in South America. Excellent background in mill and machinery sales, particularly on spinning, but can handle both spinning and weaving. Age 39, married no children. Reply to Box No. 568, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

For Sale

MAGAZINE CREEL, late model McBride, cone or tube, 352 ends, individual stop motion. Cocker Ball warper, counter, motor with Reeves drive and brake. Reply to Box No. 565, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

WANTED—ASSISTANT FOREMAN

Assistant Foreman for machine and maintenance shop in North Carolina textile mill. 30 - 35 years. H. S. graduate. Excellent opportunity for advancement. $4,500 year. Write GUY ARTHUR & ASSOCIATES, INC., Box 47, Toccoa, Georgia.

POSITION WANTED

Available, Superintendent or Assistant Superintendent of Cotton Mill, specialized in weaving. Good general knowledge of all departments, also production and quality control. Good producer, over twenty-four years experience. I.C.S. course. University training in Business Management and Industrial Organization. Best of references. Reply to Box No. 564, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

SYNTHETIC YARN EXPERT

Successful as Plant Manager and Superintendent of Worsted Yarn Mills desires position with progressive Textile Plant. Energetic and competent in production planning and profitable operation. College degree Industrial Management, Textile School, great practical experience. Age 46, employed but available on short notice. Reply to Box No. 566, TEXTILE INDUSTRIES, 806 Peachtree Street N.E., Atlanta 5, Georgia.

Loom Fixers

Wanted—Experienced loom fixers on

Fletcher narrow fabric looms. Highest pay. Steady work. Apply in person or by mail. OEHRLE BROTHERS COMPANY, INC., 423 N. 3rd St., Philadelphia 23, Pa.

Faculty Position

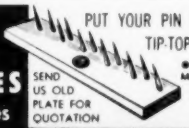
Faculty position open for teaching textile chemistry and performing fundamental and applied research. Ph.D. preferred. Please reply giving full resume of training, experience and salary requirements. H. A. Dickert, Textile School, Georgia Tech, Atlanta, Ga.

Position Available

Opening for experienced Carder and Spinner for Cotton Mill located in Piedmont Section of North Carolina. Reply to Box No. 567, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

BRASS PIN-PLATES All Sizes

PUT YOUR PIN TENTERS IN TIP-TOP CONDITION



SEND US OLD PLATE FOR QUOTATION

• Pins in Stainless, Monel, Plain Steel

All Diameters Any Length

SOUTHERN TEXTILE WORKS

P. O. BOX 406 ANDERSON, S. C.

The Three Grand Divisions of the Knitting Industry

proudly announce

THE KNITTING ARTS EXHIBITION OF 1953

Atlantic City Auditorium, Atlantic City, N. J.

April 27 through May 1

National Association of Hosiery Manufacturers
National Knitted Outerwear Association
Underwear Institute

At this great Exhibition more than two hundred leading manufacturers will present the latest and the best in knitting machinery, equipment, supplies and services.

Every key executive in every branch of the industry will find at the Exhibition something of special and particular interest. Thousands will attend.

Atlantic City offers a wide range of excellent hotel accommodations, but early reservations are imperative.

Plan now to attend the Knitting Industries' Greatest Exhibition.

Tickets may be secured free from exhibitors or from the management of the Knitting Arts Exhibition

For further information write

ALBERT C. RAU, Manager, 332 Park Square Building, Boston, Mass.

ADVERTISER'S INDEX

A

Abbott Machine Co. 66
Adams Co., R. P. 68
Advertising Council, Inc. ..... *
Air-Perme-Ator Mfg. Co. 207
Aldrich Machine Works 17
Allen Beam Co. 198
Allen Son's Co., Wm. 218
Allen Warper Company 192
Allis Company, Louis ..... *
Allis-Chalmers Mfg. Co. 48
Althouse Chemical Co. 63
Alvey Conveyor Mfg. Co. ..... *
American Air Filter Co. ..... *
American Aniline Products, Inc. 141
American Associated Consultants, Inc. 205
American Cyanamid Co., Textile Resins Div. 156
American Lava Corp. 23
American Moistening Co. 7
American Monorail Co., Inc. 130
American Paper Tube Co. 74
American Pulley Co. ..... *
American Steel & Wire Co. ..... *
American Viscose Corp. 15
American & Efird Mills, Inc. 210
Amplex Mfg. Co. ..... *
Anheuser-Busch, Inc. ..... *
Arkansas Company, Inc. 18
Armstrong Cork Co. 24, 25
Arnold Hoffman & Co., Inc. ..... *
Ashworth Bros., Inc. ..... *
Askania Regulator Co. ..... *
Atkinson Haserick & Co. ..... *
Atlanta Belting Co. ..... *
Atlanta Paper Co. 50
Atlantic Steel Co. ..... *
Aurora Pump Co. 214
Avondale Mills 216

B

Bachmann Uxbridge Worsted Corp. 8, 9
Bahnson Co. ..... *
Barber-Colman (Textile Div.) 174
Barnes Textile Associates, Inc. 218
Best & Co., Edward H. 225
Bijur Lubricating Co. 167
Binney & Smith, Inc. 195
Birch Brothers, Inc. ..... *
Bond Co., Charles 212
Borne, Scrymser Co. ..... *
Brinton Co., H. 28
Brush Development Corp. 86
Bryant Electric Company ..... *
Buffalo Forge Co. ..... *
Buffalo Pumps, Inc. 162
Butterworth & Sons, Inc., H. W. 39

C

Calco Chemical Division ..... *
Carborundum Co. 187
Carrier Corporation ..... *
Carter, Inc., A. B. 214
Celanese Corp. of America & Subsidiary Cos. 138, 139
Ciba Co., Inc. ..... *
Clark Equipment Co. (Industrial Truck Division) ..... *
Classified Ads 228
Clayton Co., J. M. ..... *
Cleveland Crane & Engineering Co. ..... *
Cleveland Elec. Co. 225
Clinton Foods Inc. 204
Clipper Belt Lacer Co. 222
Cocker Mach. & Fdry. Co. ..... Front Cover
Cole Co., R. D. 208
Cole Engineering Corporation ..... *
Coleman Company, Inc. 224
Colson Corporation 203
Columbia-Geneva Steel ..... *
Commercial Factors Corp. ..... Second Cover
Cone Mills Corp. 62
Continental-Diamond Fibre Co. 189
Corn Products Sales Co. ..... *
Courtaulds, Inc. 158
Crabb & Co., Wm. ..... *
Crane Co. ..... *
Crompton & Knowles Loom Works 11
Crompton-Richmond Factoring Division 191
Crossett Chemical Co. ..... *
Curlator Corp. (Textile Div.) 19
Curtis & Marble Machine Co. 220
Cutler-Hammer, Inc. ..... *
Cyclotherm Corporation 220

D

Darnell Corp., Ltd. 192
Dary Ring Traveler Co. 206
Davis & Furber Machine Co. ..... *
Dayton Rubber Mfg. Co. 46, 47
Dexter Chemical Corp. 27
Dixie Leather Corp. ..... *
Dixon Saddle Co. ..... *
Dodenhoff Co., W. D. ..... *
Dodge Mfg. Corp. ..... *
Dommerich & Co., L. F. ..... *
Dow Corning Corp. 51
Draper Corporation 1
Dronsfield Bros. Ltd. 202
Du Pont de Nemours & Co., Inc., E. I. (Dyestuff Div.) 21
Du Pont de Nemours & Co., Inc., E. I. (Electrochemicals Dept.) 65
Du Pont de Nemours & Co., Inc., E. I. (Finishes Div.) 45
Du Pont de Nemours & Co., Inc., E. I. (Plastics Division) ..... *
Du Pont de Nemours & Co., Inc., E. I. (Textile Fibers) 29

E

Economy Baler Co. 226
Emery Industries, Inc. ..... *
Engineered Plastics, Inc. 185
Ericz Mfg. Co. ..... *
Excel Textile Supply Co. ..... *

F

Fafnir Bearing Co. 37
Ferguson Gear Co. 220
Fidelity Machine Co. 209
Finnell Systems, Inc. ..... *
Fletcher Works 222
Foster Machine Co. 43
Foxboro Company 38
Frankl Associates, Ernest L. ..... *
Franklin Process Co. ..... *

G

Gaston County Dyeing Machine Co. ..... *
Gastonia Brush Co. 222
Gates Rubber Co. ..... *
Gaylord Container Corp. 14
General Dyestuff Corp. 55
General Dyestuff Corp. (Antara Div.) ..... *
General Electric Co. 58, 59
General Radio Co. ..... *
Georgia-Carolina Oil Company 194
Gifford-Wood Co. ..... *
Glasco Equipment Corp. 183
Graton & Knight Co. ..... *
Grinnell Company, Inc. ..... *
Gulf Oil Corp. 41

H

Hart Products Corp. ..... *
Hayes Industries, Inc. ..... *
Hayssen Mfg. Company ..... *
Herr Mfg. Company 5
Holt Hardwood Co. ..... *
Holyoke Machine Co. 22
Hotels Dinkler 227
Houghton & Co., Inc. E. F. 164
Howard Bros. Mfg. Co. 56
Hubinger Bros. Mfg. Co. ..... *
Huffman-Wolfe Co. 176
Hunt Loom & Machine Works, Inc. ..... *
Hunter Machine Co., James 71
Hyatt Bearings Division ..... *
Hyster Company 31

I

Ideal Industries, Inc. 146
Ideal Mach. Shops ..... *
Industrial Brush Company 188
Industrial Plastics, Inc. 44
International Correspondence Schools 223
International Salt Co., Inc. ..... *

J

Jacobs Northern Div., E. H. 82
Jenkins Metal Shops, Inc. ..... *
Jenkins Sons, Inc., M. W. 169
Johnson Bronze Co. 181
Johnson Corp. 196
Johnson Machine Works, Chas. B. 190

K

Kali Mfg. Co. 224
Keever Starch Co. 150
Keystone View Co. 197
Kidde Mfg. Company ..... *
Kidde & Co., Inc., Walter 42
Kluttz Machine & Fdry. Co. ..... *
Knitting Arts Exhibition 229

ADVERTISER'S INDEX

L

Lane & Bros., Inc., W. T. ..... *
Lassonde, Joseph M. 210
Laurel Soap Mfg. Co. 219
Lawlor Co., S. C. ..... *
Lazenby & Co., F. A. 218
Lee Co., L. A. 226
Lestershire Spool & Mfg. Co. ..... *
Lewis & Co., J. E. ..... *
Link Engineering Co. 204
Livermore Corp., H. F. 49
Lockwood Greene Engineers ..... *
Logan Co. 179
Logemann Brothers Co. ..... *
Loper Co., Ralph E. 224

M

M-B Products 194
Machinecraft, Inc. 44
Manton-Gaulin Mfg. Co., Inc. ..... *
Maple Flooring Mfrs. Assn. 8
Marquette Metal Products Co. 72
Marshall & Williams Corp. ..... *
Mason-Neilan Regulator Co. ..... *
Meadows Mfg. Co. ..... *
Meese, Inc. 218
Merrow Machine Co. 184
Miller Motor Co. 32
Milton Machine Works 226
Minneapolis-Honeywell Regulator Co. ..... *
Moisture Register Co. ..... *
Momar, Inc. 216
Monsanto Chemical Co. 4
Monticello Bobbin Co. ..... *
Morris Fur Co. 224
Mt. Hope Machinery Co. 190
Murry Co. of Texas, The 178

N

Nash Company, J. M. ..... *
National Aniline Div. ..... *
National Business Publications ..... *
National Drying Mchy. Co., Inc. 206
National Research Bureau, Inc. ..... *
National Ring Traveler Co. 222
National Starch Products, Inc. 35
National Tube Co. ..... *
New Departure Div. 132
New England Bobbin & Shuttle Co. ..... *
New York & New Jersey Lubricant Co. 172
North, Inc., Frank G. 220

O

Oakite Products, Inc. 226
Onyx Oil & Chemical Co. ..... *
Orr Felt & Blanket Co., The 215

P

Parks-Cramer Co. 166
Penick & Ford, Ltd., Inc. 222
Perfecting Service Company 177
Perkins & Sons, Inc., B. F. 136
Permutit Co. 208
Pick Mfg. Co. 180
Pneumafil Corporation ..... *
Powell Co., Wm. ..... *
Precision Gear & Mach. Co. 195
Presser & Co., E. J. ..... *
Proctor & Gamble Distributing Co. ..... *
Proctor & Schwartz, Inc. 13
Product Sales, Inc. 44

R

Ragan Ring Co. 184
Red-Ray Mfg. Co. ..... *
Reeves Pulley Co. ..... *
Refined Products Corp. 2
Reiner, Inc., Robert ..... *
Reliance Electric & Engr. Co. ..... *
Rhoads & Sons, J. E. ..... *
Rice Dobby Chain Co. 224
Richards-Wilcox Mfg. Co. ..... *
Ridge Tool Co. 165
Riggs & Lombard, Inc. ..... *
Robbins & Myers, Inc. 186
Robert & Co., Associates, Inc. 232
Rohm & Hass Co. 57
Ross Engr. Corp., J. O. ..... *
Roy & Son Co., B. S. ..... *
Royce Chemical Co. ..... Fourth Cover

S

Saco-Lowell Shops 52
Sandoz Chemical Works ..... *
Sant 'Andrea ..... *
Sarco Company, Inc. ..... *
Sargents Sons Corp., C. G. 170
Scherr Co., Inc., Geo. ..... *
Scholler Bros., Inc. 33
Scott Testers, Inc. ..... *
Seydel-Woolley & Co. 70
Shafer Bearing Corp. ..... *
Shepard Niles Crane & Hoist Corp. 175
Simco Company 227
Sims Sheet Metal Works 212
Sinclair Refining Co., Inc. ..... *
Singleton & Sons, Russell A. 198
Sipp-Eastwood Corp. ..... *
Sirrine & Co., J. E. ..... *
Smith, Drum & Company ..... *
Solvay Process Division, The Allied Chemical & Dye Corp. ..... *
Sonoco Products Co. 78
Southeastern Engineering Co. ..... *
Southern Co. ..... *
Southern Shuttles Div. 160, 161
Southern Sizing Co. ..... *
Southern States Equip. Corp. ..... *
Staley Mfg. Co., A. E. ..... *
Standard Fabricators, Inc. 154
Standard Industrial Prod. Co. 223
Standard Oil Company, Inc. 64
Standard Pressed Steel Co. 148
Statikil Division ..... *
Star Woolen Company 20
Steel Heddle Mfg. Co. 160, 161
Stephens-Adamson Mfg. Co. 84
Sterling Ring Traveler Co., Inc. 212
Strandberg Engineering Laboratories 213
Sun Oil Co. ..... *
Supreme Knitting Machine Co. 54
Swift & Co. 134
Synthane Corp. 61

T

Talcott, Inc., James 182
Tanner Co., Charles S. ..... *
Tatem Mfg. Co. 188
Taylor Instrument Cos. 60
Taylor-Stiles & Co. ..... *
Tennant Co., G. H. 171
Tennessee Coal, Iron and Railroad Co. ..... *
Tennessee Corp. ..... *
Terrell Co. 80
Texas Co. ..... *
Textile Apron Co. 226
Textile Banking Co., Inc. 34
Textile Industries 176, 214, 217
Textile Laboratories 216
Textile Machine Works 88, 142
Textile Mill Suppliers ..... *
Textile Shield Co., Inc. 211
Textile Shops ..... *
Theiler Corp., H. J. ..... *
Thomaston Mills ..... *
Tidewater Associated Oil Co. ..... *
Todd-Long Picker Apron Co. 220
Toledo Scale Co. 163
Ton-Tex Corp. ..... *
Torrington Co.
(Latch & Spring Beard Needles) 67
(Needle Bearings) 40
Tower Iron Works 173
Treasury Department ..... *
Trico Fuse Mfg. Co. ..... *
Trust Company of Georgia 202
Turbo Machine Co. ..... *

U

Union Carbide & Carbon ..... *
U. S. Bobbin & Shuttle Co. 12
U. S. Ring Traveler Co. 210
U. S. Steel Corp. ..... *
U. S. Textile Mach. Co. 168
United States Rubber Co. 20
United States Rubber Co.
(Naugatuck Chemicals Div.) 69
Universal Winding Co. 53, 144
Uster Corporation ..... *

V

Van Vlaanderen Co. ..... *
Veeder Root, Inc. ..... Third Cover
Vermont Spool & Bobbin Co 221
Victor Ring Traveler Co. 26

W

Walker Div. of Draper Corp. ..... *
Wallerstein Co., Inc. 10
Walton Laboratories, Inc. ..... *
Want Ads 228
Warner & Swasey Co. 6
Watson-Williams Mfg. Co. ..... *
West Point Fdy. & Mach. Co. 76
Westinghouse Electric Corp. ..... *
Whitehead Engr. Co. 221
Whitin Machine Works 16
Whitinsville Spinning Ring Co. 197
Wicaco Machine Corp. 216
Wildman Mfg. Co. ..... *
Wolf & Co., Jacques 152
Wonalancet Company 196

Y

Young Aniline Works ..... *

Serving the Great Names in Textiles

Dixie Mercerizing Co.
Chattanooga, Tenn.

Alabama Mills, Inc.
American Bemberg Corporation
Cabin Crafts, Inc.
Chicopee Manufacturing Corporation
Cluett, Peabody & Co., Inc.
Crompton Company
Crystal Springs Bleachery
Davenport Hosiery Mills
B. F. Goodrich Company
Goodyear Tire and Rubber Company
Marshall Field & Company, Inc.
Mt. Vernon-Woodberry Mills, Inc.
Muscogee Manufacturing Co.
Peerless Woolen Mills
Pepperell Manufacturing Co.
Swift Manufacturing Co.
Standard-Coosa-Thatcher Co.
Swift Spinning Mills
The Springs Cotton Mills
Thomaston Mills
United Merchants & Manufacturers Co., Inc.
West Point Manufacturing Co.

Through the years the Dixie Mercerizing Company has earned a fine reputation for its top quality Dixie Durene yarns.

To maintain its standing, the Company has continuously improved and expanded its plant facilities and modernized machinery and production methods.

During the past 30 years, Robert and Company Associates has served on numerous modernization programs for the Dixie Mercerizing Company.

Our Textile Engineering Division is especially qualified to provide layouts and designs for all types of projects related to the textile industry. Regardless of the size of your project, Robert and Company Associates is ready to serve you.

ROBERT AND COMPANY ASSOCIATES

Textile Engineering Division

ATLANTA

Get CUT-UNIFORMITY...

with

CUT METERS

on Your Looms

Whether your first concern is to cut down on seconds . . . to satisfy a hard-to-please market . . . or to step up the efficiency of a subsequent handling or finishing operation . . . *you've got to get uniform cuts of cloth from your looms.*

The simplest, most effective answers to this need are Veeder-Root Cut Meters, because they're easy to operate . . . can be made to light a light or stop the loom at pre-set woven yardage. Reading is positive and remains until reset by weaver or cut boy. What's more, Veeder-Root Cut Meters are dependable, and have earned the acceptance of leading mills.

Now, whether your particular uniformity problems are on looms, frames, twisters or preparatory equipment, you can count on *"The Name That Counts"* to give you the help of factory-trained Veeder-Root engineers. Just write the nearest Veeder-Root office.

VEEDER-ROOT

INCORPORATED

HARTFORD 2, CONNECTICUT

GREENVILLE, S. C.

"The Name That Counts"

New York 17, N. Y. • Chicago 6, Ill. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

powdered desizers ?
take your choice...
the best are **NEOZYMES**
-made by
ROYCE

NEOZYME® | NEOZYME® HT

IDEAL FOR LOW TEMPERATURES...
for heat-saving desizing at 120° to 125°F

OUTSTANDING MONEY VALUE...
1 pound equals 8 pounds of liquid enzyme

SPACE-SAVING...
concentration cuts storage space 87½%
and saves handling cost

IDEAL FOR HIGH TEMPERATURES...
for efficient desizing at 160°F

CONCENTRATED...
saves storage space—cuts handling cost

SUPERIOR HEAT STABILITY...
at high temperatures—better than liquid
commercial enzymes

LONG LIFE...can be kept indefinitely under ordinary storage conditions.

CONTROLLED QUALITY...strict Royce laboratory control guarantees safe, stable, uniform products.

COMPLETE SERVICE...the Royce Technical Service—with years of experience—always available to help solve your desizing problems.

ROYCE CHEMICAL CO.

Royce

CHEMICAL COMPANY • CARLTON HILL, NEW JERSEY
Manufacturers of Chemicals for the Textile Industry

Write today. We'll send you full information and data sheets on either or both powdered NEOZYMES.

Prefer a liquid desizer?
Ask for data on
NEOZYME L and NEOZYME L Conc.

0397